

CONSUMERS' RESEARCH

INCOMPLETE FILE

Bulletin



December 1947

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CONSUMERS' RESEARCH



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BULLETIN

December 1947

Off the Editor's Chest

THE upward trend of prices, particularly for food, is as much a part of the newscasters' daily reports as the weather these days. In fact, high prices are a good deal like the weather in that—to paraphrase a famous remark—a lot has been said about them, but nothing much is done. Since the problem has become a political issue, all sorts of quack panaceas are being advocated in order to avoid the unpleasant prospect of cutting off the take of some particular group that is believed to control many votes.

The cost of food in the United States, according to The Wall Street Journal, in September 1947, was up 177 percent at wholesale over the price level of August 1939. The causes of this rise are ascribed to "full employment" at home and an almost single-handed attempt on the part of the United States to feed the world. Another journal, Business Week, holds that the government can stop the rise of food, without controls, if it wants to, pointing out that the whirlwind advances in foodstuffs were largely set off by large-scale government buying of grain. Furthermore, the magazine calls attention to the fact that when Washington officials predict higher prices for eggs, milk, and beef next summer, *prices of these commodities go up, here and now.*

Some consumers apparently labor under the illusion that the government is actually doing all in its power to keep prices down; yet the exact opposite is true. In the field of farm products, for example, the federal government is committed by

law to "maintain" prices by a formula that assures farmers not less than 90 percent of the calculated parity prices for their major products until the end of 1948. The formulas by which "parity prices" are calculated and the mechanisms by which farm prices are supported are not easy for the layman to understand, but the results are plain for all to see. As Mark Sullivan, who has been campaigning practically single-handed against federal support of farm prices, has pointed out, this government support of prices stands as an immovable barrier against any general reduction of prices of food, for "Upon indication that the prices of a farm product may turn downward, the Department of Agriculture moves to prevent the drop." According to one report, government support of prices of peanuts is holding the price of peanut butter at 40 cents a pound when it should be selling at 25 cents. In a free market turkeys might be expected to drop to lower prices, but the government's support price for New York dressed turkeys under 16-pound weight is 46 cents a pound. The enforced destruction of surplus potatoes which the government bought with taxpayers' money to keep retail prices up so that those same taxpayers could not afford to buy them freely is too well known to require more than passing mention. The picture of the government's purchasing some 160,000,000 dozen eggs to support the price level and then wondering what to do with them was so preposterous that it nearly caused the downfall of Mr. Luckman's committee, with its egg-saving Thursdays.

(Continued on page 26)

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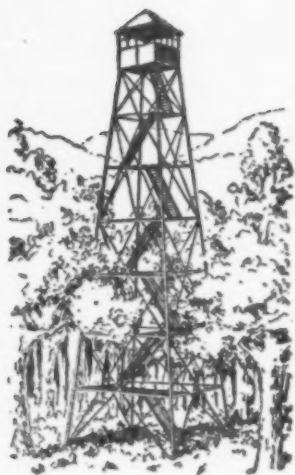
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The Consumers' Observation Post

ANTI-FREEZE will be scarce in some sections this winter. Alcohol is fairly plentiful but there is a shortage of drums for shipping it, reports The Wall Street Journal. The output of Prestone and similar "permanent" anti-freezes is still insufficient to meet the growing demand for them.

* * *

WASHING PACKAGED RICE before cooking wastes not only time but nutritive value, advises the U. S. Department of Agriculture. It appears that packaged rice is a dependably clean product and does not require the rinsing that used to be given rice sold in bulk. Studies made at the Hawaii Agricultural Experiment Station indicate that brown and partially polished rice lost thiamine (vitamin B₁) when washed before cooking. With the newer cooking methods, it is unnecessary to rinse off rice after cooking to separate the grains.

* * *

TOO MANY UNNECESSARY OPERATIONS on patients are being performed in this country, in the opinion of Dr. Harold L. Foss, surgeon in chief of the Geisinger Memorial Hospital in Danville, Pa. Oddly enough it appears that many an operation is performed because the patient likes the idea of having work done on his interior. Dr. Foss also pointed out that surgery is often resorted to in the hope of finding out just what does ail the patient, and to give the surgeon practice. It will be wise for a patient to check and recheck with at least two or more trained specialists before making a decision to have a major operation performed.

* * *

LANZETTE, A DEPILATORY DEVICE, has been ordered by the Federal Trade Commission to stop disseminating false and misleading claims. Specifically, the distributor has been ordered to cease representing that the device will permanently terminate the growth of hair on the face or body or have any beneficial effect on the body except that of producing a temporary glow or ruddiness. The Commission also found that in some cases the distributor evaded his guarantee of returning the purchase price if customers were not satisfied.

* * *

SO MANY MEN PREFER OLD CLOTHES to new ones that it is not at all surprising to read that clothiers found clearance sales of men's summer furnishings somewhat disappointing. Prices are just too high to offer any inducement. One large men's wear chain has recently raised the prices of its worsted suits \$3. The line now priced at \$37.50 is 40 percent higher than the 1939 price of \$26.75, reports Men's Wear. For those who must buy new suits this is bad news, but our guess is that many a man will gleefully cite the increase as one very good reason why he should go right on wearing what his wife calls "that terrible looking old thing."

* * *

PEOPLE WITH POOR COMPLEXIONS due to skin eruptions may be suffering from sluggish starch digestion, according to an item in Science News Letter. Studies made by Drs. Charles W. Bauer and William Francis Martin of Massachusetts College of Pharmacy indicated that the activity of salivary amylase, a chemical in the saliva which digests starch, is subject to considerable variation. Samples of this substance, taken from the saliva of 150 persons without skin eruptions, were found to digest starch in one to six minutes; in samples from 79 persons who had skin eruptions, the digestion time ran from one minute to over one hour. In these days of extra high prices for the high-quality (protein)

foods, we hesitate to suggest it, but it would appear that those who wish to clear up a poor complexion will be well advised to give up starchy foods so far as practicable, and stick as close to a high-protein-meat diet as food costs will permit.

* * *

MISTAKES MADE BY DRUG MANUFACTURERS can seriously endanger the public welfare. Two cases were cited as typical by the Dairy and Food Commissioner of the State of Connecticut in his Thirty-Sixth Report. In one case, an out-of-state manufacturer shipped into Connecticut bottles labeled as a vitamin B complex solution which actually contained an oil solution of estrogens. Very fortunately, indeed, the error was discovered before any of the solution could be administered, for the oil solution, the report points out, would likely have had fatal results when administered by intravenous injection as called for on the label. In another case, the Chicago manufacturer of a "diet tablet" put out a product that contained as much as 11 times the amount of atropine sulfate declared on the label, and many cases of illness due to overdosage were reported from its use. It is reassuring to know that these errors were caught, the first one very promptly.

* * *

ANYTHING CAN HAPPEN in the present drive of the President's Citizens Food Committee to get us to Eat Less food, particularly eggs, of which the government holdings amounted to nearly 90 million dozen in dried form and about 45 million dozen in frozen form on September 1, 1947. The gray flour of last year when the production was shifted from the 72 percent normal extraction of flour to 80 percent extraction ordered by the Administration, however, is not likely to make its appearance this time, predicts Business Week. It appears that those in authority learned, after some delay and much trouble and wasted effort, what agricultural experts could have told them beforehand, that the 28 percent by-products left from the 72-percent-extraction milling of flour goes into animal feed; and when the farmer doesn't get the by-products, he resorts to the uneconomical use of whole grain for feeding his stock. Anyway it is probably unnecessary for forehanded housewives to follow a trend that has been noted, toward stocking up on white flour. We say "probably" because when food is being used as a means of achieving certain political objectives, well-reasoned and overall-efficient policies do not necessarily prevail.

* * *

PRICES OF FISH caught by the Atlantic Fishermen's Union are kept artificially high because the union has ordered each boat to limit its catch. In spite of a court order forbidding the union to engage in such practices in restraint of trade in Massachusetts, fishing boats continued to limit their catch of pollock, which in September was bringing in 6-1/2 cents a pound at auction, compared with a cent a pound the previous year. Someone ought to draw Attorney General Clark's attention to the fact that it isn't just big corporations that put prices so high that consumers can't afford to buy; of course, proceedings against big business firms bring better publicity and do not have an adverse effect upon votes of any large number of people.

* * *

IODINE in small amounts in the diet is essential. In certain sections of the country where iodine is not present in the soil for transmission to the food supply grown on it, as in the Great Lakes Basin, the vital mineral is customarily added to the diet in the form of a minute quantity of potassium iodide in table salt. On the other hand, people who eat a goodly variety of foods grown in other sections, particularly sea foods which are rich in iodine, are not likely to suffer from a deficiency of this mineral. On the theory, apparently, that, if a little iodine added to the diet of the minority who live in certain sections was a good idea, iodine for everybody would afford an ideal occasion for passing a new law, Representative Frances Bolton of Ohio introduced a bill at the last session of Congress to make compulsory the incorporation of iodine in table salt sold by manufacturers in interstate commerce. Prompt action on the part of certain industrial observers forced modification of the bill, for as it was drawn it might have made impossible the purchase of any salt that was iodine-free, no matter how important it might be to any in-

(The continuation of this section is on page 29)

Seven Home and Farm Food Freezers

THE person planning to purchase a home freezer should use real care in selecting the size required, for after the purchase is made is a bad time to find that the box is too small for the needs of the household. However, Prof. John E. Nicholas of Pennsylvania State College makes a suggestion that helps to deal with the difficulty. He proposes that two small units be bought instead of one large unit, and comments that two small units are only slightly more expensive in initial cost than one large double-sized unit, and that there is an advantage in having two boxes, for one is always available in the event the other breaks down, and such a reserve box can be a lifesaver in time of difficulty, especially when competent servicemen are hard to find. The second box also permits power consumption to be reduced during seasons when the amount of food in storage is low by taking one box out of use in that period. As to the extra cost of two boxes instead of one, the statement of Prof. Nicholas that two small units are only slightly more expensive than one large unit appears to be open to question, at least at present market prices. If, for example, two 7.8 cu. ft. *Hotpoints* were purchased in preference to a 15.16 cu. ft. *Coolerator*, the difference in in-

itial cost in favor of the one large box would be \$171 or about 34%; moreover, it would be necessary for one of the smaller boxes to be shut off for 7 months out of the year if the operating costs of the two freezers were not to exceed that of the 15 cu. ft. unit. The size of the freezer required is considered to fall somewhere in the range of 5 to 15 cu. ft. per person, with the higher figure preferable for families who grow a large proportion of their own food. Where it is a case of the freezer to be used merely to supplement their food supply, it is practicable to get along with one of the smaller freezers; but the very smallest freezers, frequently featured by department stores, are not very practicable for most consumers and would be useful in any case only when used for the storage in an apartment, for example, of a small amount of frozen food as bought from the frozen-food retail store, or used in conjunction with a rented freezer locker to hold,

say, a few weeks' supply of food for the family.

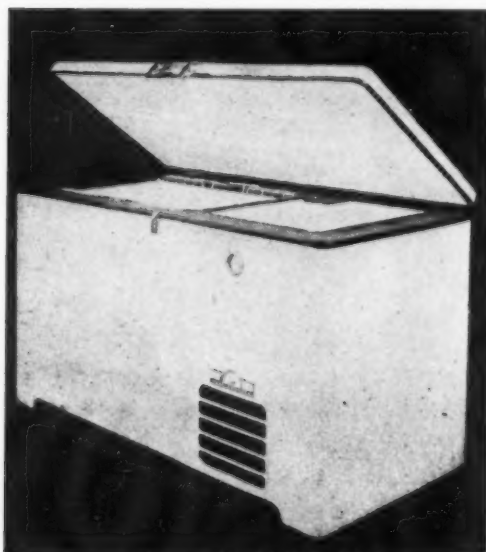
Home freezing a pound of food costs several times as much as home canning according to the Agricultural Experiment Station of Massachusetts, as reported in a recent release of the U. S. Department of Agriculture.

CR's Tests

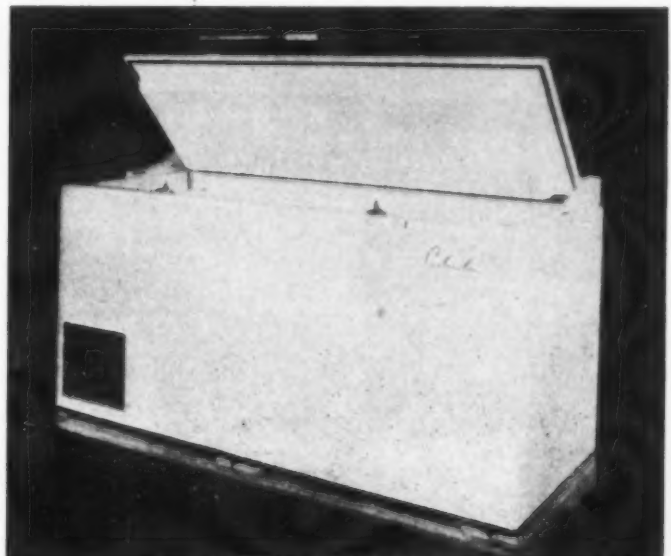
The technical tests conducted on the freezers comprised the following:

1. Pull-down test at a room temperature of 110°F.
2. No-load test at a room temperature of 90°F.
3. No-load test at a room temperature of about 30°F.
4. Load tests at a room temperature of 90°F.
5. Warm-up test at a room temperature of 90°F.

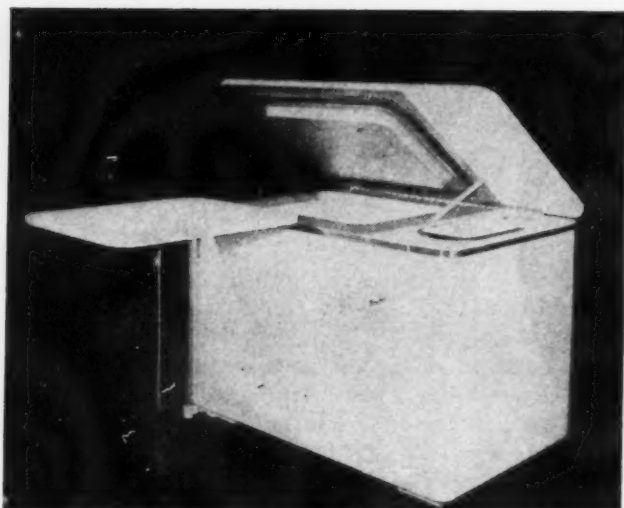
Before beginning the *pull-down test*, the freezers were allowed to



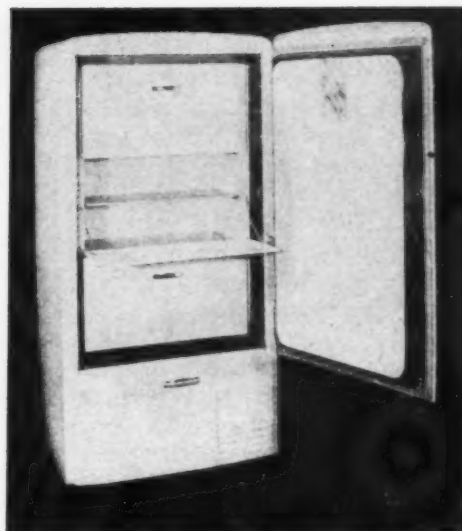
Coldspot, Model 198-511120



Coolerator, Model F-155



Maytag, Model 6TD



Firestone, Model 5-A-4

stand with the lids open in a room held at a temperature of 110°F until all parts were at room temperature. The lids were then closed, and the thermostats short-circuited to produce continuous operation. The time and energy required to lower the temperatures to stable values in the respective freezers were then determined. This gave a measure of the refrigerating capacities of the units. Results are shown in Table I. The *Hotpoint* gave easily the best performance of all freezers of the group in this test, in this respect.

The *no-load test* in the 90°F room temperature was run with the storage and freezing compartments empty; the test was made at three or more settings of the controls. The cost of operation figures obtained under the conditions of this test are, it is believed, approximately the cost figures that would characterize the freezers used under ordinary conditions in rooms whose temperature would range from 70°F to 90°F, with food being inserted at infrequent intervals. Results of the *no-load test* at 90°F appear in Table II.

As the question has been raised as to whether freezers may run into difficulty if kept in a cold place, a special *no-load test* was run in a room temperature of about 30°F. No difficulties were experi-

enced in starting any of the units at this temperature. The operating costs were reduced on the average to 1/3 of those at 90°F; this test would appear to indicate that it is desirable to locate the freezer in the coolest place that is otherwise suitable. Results of the *no-load test* at 30°F appear in Table III.

Load test. A storage load of 50% of the capacity (based on 35 lb. per cu. ft.) was placed in the storage compartment of each freezer. This was in the form of ice previously frozen in 1-qt. waxed-paper milk cartons. The freezing

load consisted of water in similar cartons, the quantity being that designated by the manufacturer as the maximum freezing load. Thermocouples placed in a selected number of cartons distributed throughout the load were used to measure the temperatures of the water and ice.

Of the seven freezers tested, only three, the *Hotpoint*, *Frigidaire*, and *Maytag* were able to meet the requirement of the American Society of Refrigerating Engineers Code of reducing the quick-freeze load to 10°F within 20 hours. The *Frigidaire* "quick-

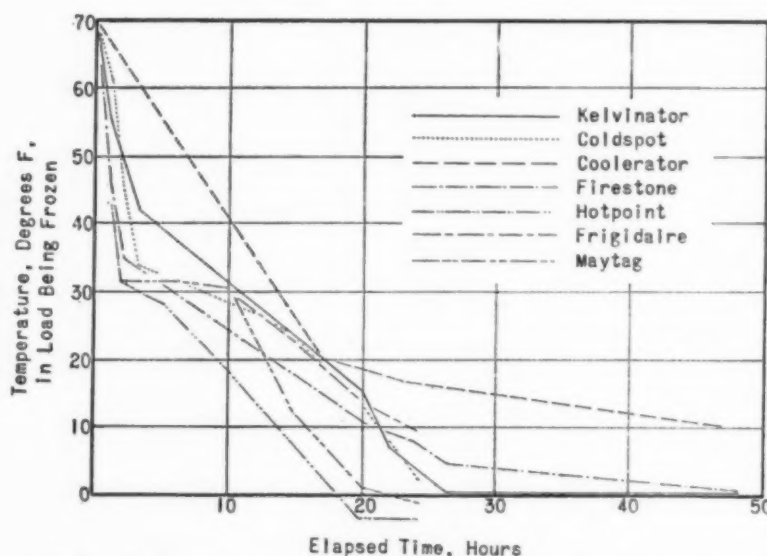
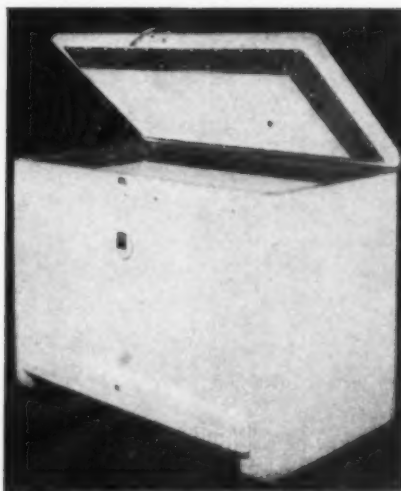


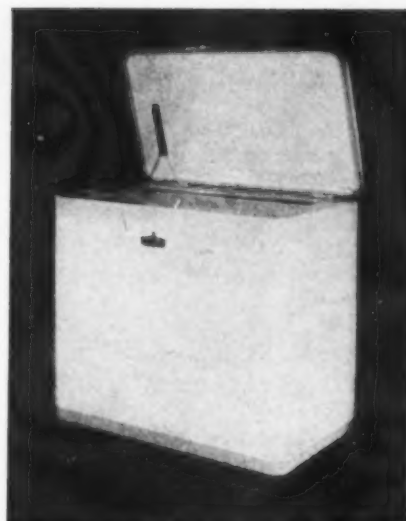
Figure 1—Average temperatures, in relation to time, of 'quick-freeze' load.



Frigidaire, Model HJ-8



Hotpoint, Model 20EK8-1



Kelvinator, Model F-6

freeze" shelf had the refrigerating capacity to freeze satisfactorily only about one-half the load which it provided space for; the remaining half, according to the manufacturer's instructions, were to be placed against the walls of the storage compartment. (This it was judged would be inconvenient in practice and would probably be less effective in "quick-freezing.") The *Maytag* had no special provision for quick-freezing, and materials which were to be quick-frozen were, according to the manufacturer's instructions, to be placed against the walls of the storage cabinet. The rela-

tively small quantity of food (10 lb.) that this machine is able to quick-freeze, and its lack of sufficient motor-compression capacity to maintain low internal temperatures at room temperatures of 90°F and 110°F indicate that the *Maytag* is really a storage cabinet for frozen foods and should be marketed as such; it hardly qualifies as a food freezer. As a general rule, the only cartons which were frozen sufficiently rapidly were those in direct contact with the freezing plates. Evidently some manufacturers are designating a maximum quick-freeze capacity much higher than their units are

capable of serving. Figure 1 shows graphically the average temperatures in the freezer compartment during the course of test. Table IV gives the results obtained in the load tests. Introduction of a quantity of food at room temperature into the box to be quick frozen will raise the temperature of the food in the storage compartment. In well-designed freezers, this rise in temperature will be relatively small. The ASRE Code requires that the temperature of the food in the storage compartment shall not rise to a temperature higher than 15°F. All of the freezers tested except *Firestone* met this requirement.

Warm-up test. The freezers were allowed to stabilize with a 50% storage load; the electricity supply was then turned off and a record made of the time required for the first carton of ice to reach 25°F. The results are shown in graphical form in Figure 2. The time ranged from 5 to 11 hours, and as most power failures are of short duration, the risk of food spoilage through a failure of the power supply would appear not to be serious.

* * *

The wide differences in cost of operation of the various freezers should be particularly noted as this is a point of immediate and

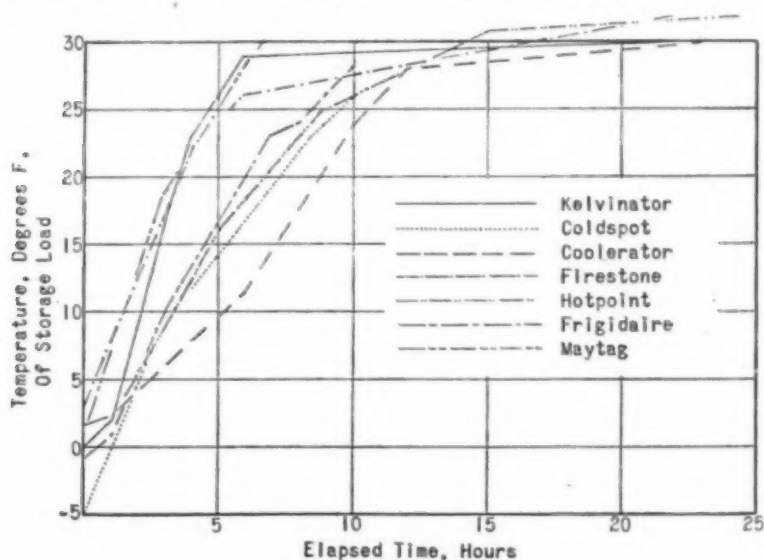


Figure 2—Warm-up test.

Table I—Pull-Down Test at 110°F Ambient
All Motors Running 100% of the Time Except Maytag
 (See Listing)

| | cu. ft. | Time hours | Temper- ature, F° | Kwhr. | Kwhr. per cu. ft. |
|-------------------|---------|---------------|-------------------------|-------|-------------------------|
| <i>Hotpoint</i> | 7.80 | 4 | —13.0 | 0.86 | 0.110 |
| <i>Coldspot</i> | 12.23 | 7 | —4.0 | 2.27 | 0.185 |
| <i>Frigidaire</i> | 7.95 | 7 | —5.7 | 1.71 | 0.215 |
| <i>Coolerator</i> | 15.16 | 10 | —12.4 | 3.43 | 0.226 |
| <i>Kelvinator</i> | 5.96 | 8 | —3.4 | 1.56 | 0.262 |
| <i>Firestone</i> | 6.15 | 8 | 9.8 | 1.67 | 0.270 |
| <i>Maytag</i> | 6.11 | 17 | 15.7 | 2.88 | 0.470 |

practical interest to every user. The freezer most expensive to operate costs about $3\frac{1}{2}$ times as much per month per cubic foot of total volume as the least expensive.

* * *

Cost of operation figures are based on an electricity rate of $3\frac{1}{2}$ cents per kilowatt-hour, which is about the average value for the United States at this time. (Those who have a large appliance load may pay much less per kwhr.) In any case the local power company will advise what the rate is for the individual consumer's particular load and the operating costs can be refigured by dividing the figures given in the last two columns of Table II by 3.5 and multiplying by the rate per kwhr. available in the community where the freezer is to be used.

A. Recommended

Hotpoint, Model 20EK8-1 (Hotpoint Inc., Edison General Electric Appliance Co., Inc., Chicago) \$329.75 (\$42 per cu. ft.). This box did not have a separate compartment for quick freezing; Two refrigerated shelves each about 6 in. x $17\frac{1}{2}$ in. at one end of the storage space were designated as the proper location for freezing foods. Volume, 7.8 cu. ft. Over-all dimensions: length, 48.6

in.; width, 31.4 in.; height, 36.4 in.; depth of storage compartment, 19.5 in. Sealed compressor unit, with $\frac{1}{5}$ hp. motor (0.025 hp. per cu. ft.); condenser, finned-tube type cooled by a small auxiliary fan; refrigerant, *Freon 12*. Temperature control dial on outside of rear wall, near top, with knob pointing upward marked "Off" and numbered 1 through 9. Insulation about 4 in. thick in side walls, $3\frac{1}{2}$ in. in lid. Outer surfaces of cabinet finished in white lacquer, inner surfaces of non-ferrous metal having a dull gray finish, inner surface of lid made of steel finished with white vitreous enamel. An electric light to illuminate interior was mounted at rear of lid. Lid, which moved easily, was mounted on two spring-controlled hinges, and held tightly closed with a chromium-plated clasp. In the pull-down test at 110°F (the purpose of which is to indicate refrigerating capacity) with control short-circuited to permit motor to run continuously, unit required only 4 hours to reach a stable temperature of —12.9°F (indicating very good refrigerating capacity). In no-load test at 90°F, ranked second (next to lowest of seven freezers tested) in energy consumption, 7.6 kwhr. per month per cu. ft. of storage space. Total energy consumption per month, 59.4 kwhr., with motor running 39% of the time. In no-load test at 30°F, ranked third in energy, at 2.1 kwhr. per month per cu. ft. of total storage

space, with motor running 8% of the time. Met the code requirement of having capacity to reduce the food to be quick-frozen to 10°F within 20 hours. During this period the temperatures of the storage load were satisfactorily low, with a maximum of 7°F. Frozen food stored in box was found to remain below 25°F for 9 hours after cut-off of electricity supply, indicating a well-insulated box. Probable cost of operation under normal conditions of use with electricity at $3\frac{1}{2}$ c per kwhr., \$2.10 (26.7c per cu. ft. per month). 2

B. Intermediate

Coldspot, Model 198-511120 (Sears, Roebuck & Co., Philadelphia) \$339.50 (\$27.70 per cu. ft.). Freezing compartment volume, 2.91 cu. ft. Storage compartment volume, 9.32 cu. ft. Total volume, 12.23 cu. ft. Over-all dimensions: length, 60.25 in.; width, 32.6 in.; height, 35.75 in.; depth of storage compartment, 27.6 in. Equipped with 2 wire baskets and 4 racks for subdividing storage space, and also one aluminum tray. Open reciprocating 2-cylinder unit, belt driven by $\frac{1}{4}$ hp. motor (0.02 hp. per cu. ft.); condenser, finned-tube type cooled by a fan on shaft of compressor motor; refrigerant, 3 lb. *Freon 12*. Dial-type thermometer and the temperature control dial were located in front of cabinet, but on latter no scale provided—marked only with 3 dots with the word "Storage" at one end and "Freezing" at the other. Insulation about 4 in. thick in side walls, about 2 in. in lid. Outer surfaces finished in white lacquer with chromium finished hardware; interior, sheet steel finished in white vitreous enamel except lid which was of polished white plastic. Lid, which was easily raised and lowered, was mounted with 2 spring-controlled hinges and held tightly closed by a latch which could be locked by a padlock if desired. Lid did not open more than 60°; the limited opening made it necessary to tip baskets in order to remove them (judged very unhandy). In the pull-down test at 110°F, unit required 7 hours to reach a stable temperature of —4°F with an energy consumption of 2.27 kwhr. (0.185 kwhr. per cu. ft.—good refrigerating capacity). In no-load test at 90°F, ranked fourth lowest of the 7 freezers tested in energy consumption, 9.1 kwhr.

Table II—No-Load Test at 90°F Ambient

| | cu. ft. | Temperature, °F | Running time % | Kwhr. per day | Kwhr. per month | Kwhr. per cu. ft. per month | Cost per month at 3.5c | Cost per month per cu. ft. |
|-----------------------|---------|-----------------|----------------|---------------|-----------------|-----------------------------|------------------------|----------------------------|
| <i>Coolerator</i> | 15.16 | 0 | 35.0 | 2.78 | 83.4 | 5.5 | \$2.90 | 19.3c |
| <i>Hotpoint</i> | 7.80 | 0 | 39.3 | 1.98 | 59.4 | 7.6 | 2.10 | 26.7c |
| <i>Frigidaire</i> | 7.95 | 0 | 45.0 | 2.09 | 62.7 | 7.9 | 2.20 | 27.6c |
| <i>Coldspot</i> | 12.23 | -0.2 | 49.0 | 3.73 | 111.9 | 9.1 | 3.90 | 32.0c |
| <i>Kelvinator</i> | 5.96 | 0 | 53.0 | 2.00 | 60.0 | 10.0 | 2.10 | 35.0c |
| <i>Firestone</i> | 6.15 | 0 | 81.0 | 2.94 | 88.2 | 14.3 | 3.10 | 50.2c |
| <i>Maytag</i> | 6.11 | 1.3 | 100.0 | 3.82 | 114.6 | 18.8 | 4.00 | 65.5c |
| <i>Bishop*</i> | 15.14 | 0 | 79.0 | 7.70 | 231.0 | 15.2 | 8.10 | 53.0c |
| <i>Deepfreeze*</i> | 8.32 | -1.2 | 36.0 | 3.90 | 117.0 | 14.0 | 4.10 | 49.0c |
| <i>Frigid Freeze*</i> | 6.23 | 11.4 | 100.0 | 4.45 | 133.5 | 21.4 | 4.70 | 75.0c |

*Brought forward from previous test

Table III—No-Load Test at 30°F Ambient

| | cu. ft. | Temperature, °F | Running time % | Kwhr. per day | Kwhr. per month | Kwhr. per cu. ft. per month | Cost per month at 3.5c | Cost per month per cu. ft. |
|-------------------------------|---------|-----------------|----------------|---------------|-----------------|-----------------------------|------------------------|----------------------------|
| <i>Coolerator</i> | 15.16 | -2.8 | 7.9 | 0.83 | 24.9 | 1.64 | 87c | 5.7c |
| <i>Maytag²</i> | 6.11 | 1.4 | 3.8 | 0.35 | 10.5 | 1.72 | 37c | 6.0c |
| <i>Hotpoint</i> | 7.80 | 2 | 8.0 | 0.55 | 16.5 | 2.10 | 58c | 7.5c |
| <i>Kelvinator</i> | 5.96 | 3.8 | 9.0 | 0.48 | 14.4 | 2.40 | 50c | 8.4c |
| <i>Frigidaire¹</i> | 7.95 | -2.3 | 18.0 | 0.79 | 23.7 | 3.00 | 83c | 10.5c |
| <i>Coldspot¹</i> | 12.23 | -6.5 | 13.8 | 1.42 | 42.6 | 3.50 | \$1.49 | 12.2c |
| <i>Firestone</i> | 6.15 | -3.4 | 19.0 | 1.05 | 31.5 | 5.10 | \$1.00 | 17.9c |

¹34°F Ambient
²27.3°F Ambient

per month per cu. ft. of storage space. Total energy consumption per month, 111.9 kwhr. with motor running 49% of the time. In no-load test at 34°F, ranked sixth in energy consumption at 3.5 kwhr. per month per cu. ft. of total storage

space with motor running 13.8% of the time. Failed to meet requirements of test code in load test; at the end of 20 hours, 2 of 6 cartons of ice in freezer space had a temperature of 28°F, and 2 cartons 15°F; at the end of 24 hours 1 carton was

still above the allowable limit of 10°F. During this period temperatures of storage load were satisfactorily low with a maximum of 5°F. Frozen food stored in box was found to remain below 25°F for 9.5 hours after cut-off of electricity supply.

Table IV—Load Test at 90°F Ambient

| | cu. ft. | Storage load lb. | Freezer load lb. | Total load lb. | Running time % | Kwhr. used in 20-hr. load test | Kwhr. per lb. of load frozen | Energy cost per lb. of load frozen |
|-------------------|---------|------------------|------------------|----------------|----------------|--------------------------------|------------------------------|------------------------------------|
| <i>Coolerator</i> | 15.16 | 234.0 | 60.0 | 294.0 | 71.0 | 4.68 ¹ | 0.078 | 0.27c |
| <i>Frigidaire</i> | 7.95 | 138.6 | 32.4 | 171.0 | 89.0 | 3.39 | 0.105 | 0.37c |
| <i>Hotpoint</i> | 7.80 | 136.8 | 25.0 | 161.8 | 72.0 | 3.04 | 0.122 | 0.43c |
| <i>Kelvinator</i> | 5.96 | 73.8 | 25.2 | 99.0 | 100.0 | 3.26 | 0.129 | 0.45c |
| <i>Firestone</i> | 6.15 | 109.8 | 23.4 | 133.2 | 100.0 | 3.34 ² | 0.143 | 0.50c |
| <i>Coldspot</i> | 12.23 | 162.0 | 40.0 | 202.0 | 97.6 | 6.12 | 0.154 | 0.54c |
| <i>Maytag</i> | 6.11 | 104.4 | 9.0 | 113.0 | 100.0 | 3.42 | 0.38 | \$1.33 |

¹Two cartons still above 10°F after 48 hours.

²Three cartons still above 10°F after 24 hours.

Probable cost of operation under normal conditions of use with electricity at 3.5c per kwhr., \$3.90 per month (32c per cu. ft. per month). 1

Coolerator, Model F-155 (The Coolerator Co., Duluth 1) \$489.50 f.o.b. factory (\$32 per cu. ft.). Freezing compartment volume, 1.82 cu. ft. Storage compartment volume, 13.34 cu. ft. Total volume, 15.16 cu. ft. Over-all dimensions: length, 73.6 in.; width, 30.5 in.; height, 38.6 in.; depth of storage compartment, 25.5 in. Equipped with 4 bins with dividers and rack, space under which is used for bulk storage. Sealed compressor unit, with 1/3 hp. motor (0.02 hp. per cu. ft.); condenser, finned-tube type cooled by small auxiliary fan; refrigerant, *Freon 12*. Temperature control dial located in machine compartment and marked from 1 to 7 "Off" and "On." Insulation about 5 in. thick in side walls, 4 in. in lid. Outer surfaces and liner of storage compartment of sheet steel finished with white lacquer; inner surface of lid of polished white plastic. Spring hinges counterbalance weight of lid, reducing the effort of raising the lid; and so lid will stay in any position in which it is left. Equipped with latches designed to permit use of padlock if desired. Had provision for attaching alarm buzzer or light, (not provided) to indicate when temperatures inside box exceeded 10°F. In the pull-down test at 110°F, unit

required 10 hours to reach a stable temperature of -12.4°F with an energy consumption of 3.43 kwhr. (0.23 kwhr. per cu. ft.) (good refrigerating capacity). In no-load test at 90°F, ranked first of 7 freezers tested in smallness of the amount of energy consumed, 5.5 kwhr. per month per cu. ft. of total storage space with control set to give an average internal temperature of 0°F. This was only about one-third of the energy consumption per cu. ft. of the *Bishop* reported in CR's October 1946 Bulletin. Total energy consumption per month, 83.4 kwhr. with motor running 35% of the time. In no-load test of 30°F, ranked first (lowest) in energy consumption using 1.64 kwhr. per month per cu. ft. of total storage space with motor running 7.9% of the time. Failed to meet requirement of test code in load test by a wide margin; at the end of specified 20 hours, 3 of 6 cartons of ice in freezer space had a temperature of 30°F and one a temperature of 20°F. At the end of 48 hours, 2 cartons were still above the allowable limit. During this period temperatures of storage load were satisfactorily low. This would appear to indicate that sufficiently fast freezing would be had only for food packages placed in direct contact with the bottom of the freezer compartment. For users who desired to quick-freeze only about 20 lb. of food at one time, this would not be a disadvantage,

per kwhr., \$2.90 per month (19.3c per cu. ft. per month). Note: We have been advised by the manufacturer that this particular model has now been discontinued and replaced by the *Model F-151*. The new model has exactly the same cabinet but uses a 1/4 hp. compressor and *Freon 22* as refrigerant. The price of *Model F-151* is \$439.50 (\$29 per cu. ft.) f.o.b., including the internal shelf details. 1
Frigidaire, Model HJ-8 (General Motors Corp., Dayton, Ohio) \$289.75 (\$36.50 per cu. ft.). This box did not have a separate compartment for quick-freezing but a space above a shelf 10 in. wide by 19 1/4 in. deep at about mid-height near one end was referred to in the manufacturer's literature as the "freezer shelf." This shelf was not refrigerated, and was removable. Volume, 7.95 cu. ft. Over-all dimensions: length, 46 in.; width, 27.9 in.; height, 33.75 in.; depth of storage compartment, 25.5 in. Sealed compressor unit with 1/8 hp. motor (0.016 hp. per cu. ft.); condenser, finned-tube type mounted diagonally at bottom of machine compartment and a small fan help exhaust the air from the top of the compartment; refrigerant, *Freon 12*. Temperature control dial shows through an opening in front of machine compartment and was marked "Off, 1, 2, 3, 4, 5, 6," but instructions stated that the control dial was properly set at factory to hold a temperature of 0°F and should be changed only

but it would not be satisfactory for farmers or other users who expect to have a large quantity of food, say a quarter or a side of beef or pork, to quick-freeze at one time. Frozen food stored in box was found to remain below 25°F for 11 hours after cut-off of electricity supply. The *Coolerator* was the best of all units tested in this respect, indicating a very well insulated box. Probable cost of operation under normal conditions of use with electricity at 3 1/2c

by a serviceman. Freezer was also equipped with alarm bell to ring when temperature rose above a predetermined value. Cabinet exterior finished in white lacquer; inner lining of compartment had a finish resembling aluminum. A single hinge with spring control balances lid, permitting easy opening and closing. Latch designed to permit use of a padlock if desired. In the pull-down test at 110°F, unit required 7 hours to reach a stable temperature of -5.7°F with an energy consumption of 1.71 kwhr. (0.215 kwhr. per cu. ft.). In no-load test at 90°F, ranked third of the 7 freezers tested in energy consumption, using 7.9 kwhr. per month per cu. ft. of storage space. Total energy consumption per month, 62.7 kwhr. with motor running 45% of the time. In no-load test at 30°F, the *Frigidaire* ranked fifth in energy consumption, using 3 kwhr. per month per cu. ft. of storage space with motor running 18% of the time. Met code requirement for load test, in a sense, in having capacity to reduce the part of the food on quick-freeze shelf that was in contact with walls, to 10°F within 20 hours, but see text. During this period temperatures of storage load were satisfactorily low. Frozen food stored in box was found to remain below 25°F for 8.5 hours after cut-off of electricity supply. Probable cost of operation under normal conditions of use with electricity at 3½¢ per kwhr., \$2.20 per month (27.6¢ per cu. ft. per month). **2**

Kelvinator, Model F-6 (Nash-Kelvinator Corp., Detroit) \$239.95 (\$40 per cu. ft.). Freezing compartment volume, 1.71 cu. ft. Storage compartment volume, 4.25 cu. ft. Total volume, 5.96 cu. ft. Over-all dimensions: length, 39 in.; width, 22.9 in.; height, 36.5 in.; depth of storage compartment, 28.5 in. Sealed, reciprocating-type unit with 1/5 hp. motor (0.034 hp. per cu. ft.); condenser built into outer wall of cabinet; refrigerant, *Freon 12*. Temperature control dial located in machine compartment and marked "Off, (warmest) 6, 5, 3, 2, 2, 3, 5, 6 (coldest)." Warmer side was also marked "long time storage," and cooler side "sub-zero storage." Insulation about 4 in. thick in side walls, 2¼ in. in lid. Outer surfaces of sheet steel finished with white lacquer; inner surfaces had an aluminum finish, except for lid which was of polished white plastic. No latch was provided

for lid. Sealing of the lid was provided for by weight of the lid resting on a soft rubber pad. Lid, however, in sample tested did not make a tight seal. In pull-down test at 110°F, unit required 8 hours to reach a stable temperature of -3.4°F with an energy consumption of 1.56 kwhr. (0.26 kwhr. per cu. ft.). In no-load test at 90°F, ranked fifth of 7 freezers tested in economy of operation, using 10 kwhr. per month per cu. ft. of total storage space. Total energy consumption per month, 60 kwhr. with motor running 53% of the time. In no-load test at 30°F, ranked fourth in energy consumption, using 2.4 kwhr. per month per cu. ft., with motor running 9% of the time. Failed to meet requirement of test code in load test; at end of the specified 20 hours, 3 of 5 cartons of ice in freezer space had a temperature of 22°F and 1 carton 12°F; in 27 hours all cartons were below the maximum limit of 10°F. During this period, temperatures of cartons of storage load were satisfactorily low with a maximum of 10°F. Frozen food stored in box was found to remain below 25°F for 5 hours after cut-off of electricity supply, one of the three poorest in this respect. Probable cost of operation under normal conditions of use with electricity at 3½¢ per kwhr., \$2.10 per month (35¢ per cu. ft. per month). **2**

Leonard, Model LFR-6 (Leonard Division of Nash-Kelvinator Corp., Detroit) \$239.95. This freezer was essentially the same as *Kelvinator F-6* listed above. **2**

C. Not Recommended

Maytag, Model 6TD (The Maytag Co., Newton, Iowa) \$269.50 (\$44 per cu. ft.). Collapsible table about \$10 extra. This freezer did not have a separate compartment for quick-freezing, and manufacturer directs users to place foods that are to be quick-frozen in contact with the walls; this it would be judged would often be inconvenient. Volume 6.11 cu. ft. Over-all dimensions: length, 47.5 in.; width, 29 in.; height, 31.75 in.; depth of storage compartment, 23 in. Sealed compressor unit with 1/6 hp. motor (0.027 hp. per cu. ft.); condenser, finned-tube type, mounted horizontally at bottom of compartment and cooled by convection currents; refrigerant, *Freon 12*, flow of which is controlled by capillary tube. A non-refrigerated removable defrosting tray about 13 in.

by 8.5 in. by 4 in. deep is located to the right of the food compartment directly above machine compartment. Temperature control dial located in machine compartment below "defrosting tray" was marked only with the word "colder" and an arrow to indicate that direction. Adjustment of box temperature made by a control device apparently intended for use of serviceman only. Insulation about 4½ in. thick in side walls, 2½ in. in lid. Cabinet finished in white lacquer; inner surfaces of steel with vitreous-enamel finish, except for lid liner above storage compartment which is of stainless steel. Lid, which moved fairly easily on a single hinge with spring control, was kept closed by its own weight; spring control effect began when lid was lifted about one-quarter way up. In pull-down test at 110°F with control short-circuited, unit required 17 hours to reach a stable temperature of 15.7°F, indicating poor refrigerating capacity. During this time, although thermostat remained closed, motor ran only 79.4% of the time because of repeated tripping of the overload release caused by heating of the motor. In no-load test at 90°F ranked highest of 7 post-war freezers tested in energy consumption, using 18.8 kwhr. per month per cu. ft. of storage space. Total energy consumption per month, 114.6 kwhr. Motor ran continuously, to produce a temperature close to zero at a room temperature of 90°; this was indicative of very inadequate power for its job (only motor of the 7 freezers tested to run continuously in this way). Met the code requirement of having capacity to cool the food to be quick-frozen to 10°F within 20 hours (see text). During this period, the temperatures at various parts of the storage load were satisfactorily low, with a maximum of 13°F. Frozen food remained below 25°F for 5 hours after cut-off of electricity. Probable cost of operation under normal conditions of use with electricity at 3.5¢ per kwhr., \$4 per month (65.5¢ per cu. ft. per month), which was highest of the 7 freezers tested. As at present designed, should be marketed as a food-storage cabinet, rather than as a freezer. **2**

Firestone, Model 5-A-4 (Firestone Tire & Rubber Co., Akron, Ohio) \$329.95 (\$53.50 per cu. ft.). Upright cabinet type similar to a refrigerator with

one large door giving access to 3 smaller drop doors dividing the interior into 3 main compartments, one above the other. The top drop door opens into a single compartment about 12 in. high, and each of the other doors opens to 2 compartments each about 6 in. high, making a total of 5 compartments. Cooling of the storage space was done by means of refrigerated shelves. These shelves served also to separate adjoining compartments, and in addition there was a freezer plate at the top of the top compartment, but no freezing plate at the bottom of the lowest compartment. There was a warm-storage bin at front of machine compartment. Total storage volume, 6.15 cu. ft. Over-all dimensions: width, 30 in.; depth, 27.6 in.; height, 62 in. Sealed compressor unit with $\frac{1}{8}$ hp. motor (0.02 hp. per cu. ft.); condenser,

finned-tube type mounted diagonally at the rear of cabinet, cooled by natural circulation of air aided by chimney effect of duct mounted at rear of cabinet; refrigerant, *Freon 12*. Temperature control dial mounted at top of cabinet inside main door. Outer surfaces finished with white lacquer, inner surfaces with white vitreous enamel. In pull-down test at 110°F, unit required 8 hours to reach a stable temperature of 9.8°F with an energy consumption of 1.67 kwhr. (0.27 kwhr. per cu. ft.). In no-load test at 90°F, was next to the highest in energy consumption of the 7 freezers tested, using 14.3 kwhr. per month per cu. ft. Total energy consumption per month, 88.2 kwhr. with motor running 81% of the time. In no-load test at 30°F, ranked last (highest) in energy consumption at 5.1 kwhr. per month per

cu. ft. of storage space with motor running 19% of the time. Failed to meet requirement of test code in load test, 3 of 9 cartons of ice having a temperature of 32°F at the end of 20 hours; at the end of 27 hours, 2 of the cartons were still above the allowable limit of 10°F. The temperatures of several cartons of ice in the storage load also exceeded the code limit of 15°F during this period. Frozen food stored in box was found to remain below 25°F for 5 hours after cut-off of electricity; one of three poorest in this respect. Probable cost of operation under normal conditions of use at 3.5c per kwhr., \$3.10 per month (50.2c per cu. ft., which was the second highest of any box in this test and in approximately the same category as the *Bishop* and *Deepfreeze* reported in *Consumers' Research Bulletin*, October 1946). 3

Product Changes Not as Frequent as Supposed

SOME subscribers who write to CR about various products apparently go on the assumption that everything which is sold changes rapidly, and that findings from tests which were carried out a few months or a year or so back, are of no significance today. This is an impression that needs to be corrected, for, fortunately for the consumer, such rapid and constant change does not occur with many articles; this was pointed out in the brief article in our July 1946 BULLETIN. Among articles which are fairly stable in characteristics—and this list is by no means complete, for hundreds of important items used by consumers could be included in this category—are: bicycles, water pumps, home heating plant

equipment, vacuum cleaners, gas and electric hot-water heaters, gas and electric stoves, ironers, washing machines of the pre-war or "standard" type.

A wide range of chemical specialties, household cements, detergents, and scouring powders are in the same class, in that they often retain for years a relative stability of composition and characteristics, and data taken this year will be, for the most part, equally valid several years from now. The consumer must bear in mind that changes in appearance are made in a good many articles (automobiles are a striking example) when no substantial changes in the product are occurring, or the changes consist primarily of taking out the "bugs" and modifying minor

details that didn't turn out as expected, in the first design. Appearance changes are, of course, the manufacturers' way of providing the dealer with something new or new-appearing to sell, so that the consumer can be made to feel that what he bought a few years ago is out of date or perhaps barely serviceable as compared with today's output. Actually, the essential qualities of the article are not appreciably affected—may, indeed, in some cases not be as good as they were in the earlier model. (This is perhaps particularly likely to be the case in the field of radio, where a given firm may market a very good product in one year and in a subsequent year will perhaps produce only a second- or third-rate product.)

DESPITE the fact that shirts are among the most conspicuous items of men's attire, they vary so little in style that differences between them are limited to material, workmanship, and accuracy of cut and fit.

The most popular of all shirting materials is broadcloth. This is a plain, close-woven fabric with a crosswise rib and a lustrous surface. Fine-quality broadcloths are woven with two-ply yarns in the warp and filling, but these fine fabrics are usually found only in high-priced shirts, and none were included in this test. Medium- and good-quality broadcloths are made of single-ply yarns. The American Society for Testing Materials (ASTM) has set up Tentative Standards for Bleached Cotton Broadcloth, and have classified single-ply broadcloths into two groups, *Type 1a* and *Type 1b*. Some of the requirements for these two groups are:

| | <i>Type 1a</i> | <i>Type 1b</i> |
|---------------------------------|----------------|----------------|
| Count, minimum yarns per in. | | |
| Warp..... | 100 | 132 |
| Filling..... | 54 | 58 |
| Weight, oz. per sq. yd. | | |
| Minimum..... | 3.0 | 3.1 |
| Maximum..... | 4.0 | 4.0 |
| Breaking strength, minimum, lb. | | |
| Grab test | | |
| Warp..... | 56 | 76 |
| Filling..... | 20 | 24 |

Type 1b broadcloths are fine, closely woven, durable fabrics that launder well. *Type 1a* fabrics have fewer yarns per square inch than *Type 1b* fabrics, and in the shirts tested, the *1a* fabrics in most instances showed a slightly heavier weight per square yard than the *1b* fabrics. In the listings, thread counts and tensile strengths of fabrics met the ASTM Standards except where noted. All fabric weights fell within the limits expressed for the type. In the case of each of the following shirts, the measured tensile strengths were well above ASTM requirements for the type: *Opera*, *Pilgrim* and



Men's Shirts

Pilgrim Pima, *Arrow*, *Jayson*, and *Van Heusen*.

Only one of the shirts tested was not a broadcloth. It was percale, a fabric that is firm and closely woven and easy to launder. The percale fabric in the *Mohawk* was of a good grade and was judged to be one of the better fabrics of the shirts tested.

For most satisfactory service, all fabrics used in making shirts should be full shrunk or Sanforized. All the shirts included in this test were cut from pre-shrunk fabrics, and in most cases the residual shrinkage of the shirts in all areas (with the exception of collars on four shirts) did not significantly exceed 1%. Collars of the *Brent*, *Mohawk*, *Lion of Troy*, and *Pilgrim Pima* shrank from 2.5% to 3%. However, the manufacturer had made adequate allowance for the shrinkage, and the marked size of the collars was correct after washing.

Fine workmanship makes an attractive shirt. Underarm seams should be well joined, and there should be no exposed raw edges of fabrics showing. Stitching need not be especially fine for durability, but shirts with 18 or more stitches per inch in the collar and center pleat have a slightly better appearance than others. Buttonholes should be well made and even and pearl buttons are considered the most desirable. In

the shirts tested, all buttons were well matched on the individual shirts except the cuff buttons of the *Van Heusen* which showed slight differences in measurements and appearance.

Construction

Most men prefer collars attached to shirts. The "fused" collar is said to rank first in popularity; it is doubtful if this type of collar would be so popular if consumers realized the handicap the process puts upon collar life when not carefully executed. The term "fused" is applied to collars treated by any one of several processes to give them a permanent starched appearance. Some of these collars are satisfactory, while others tend to separate and blister after laundering. Four collars of shirts in the test showed noticeable blistering or separation after one laundering. Shirts which had collars that failed early in the test were given *C-Not-Recommended* ratings, because such shirts have lost their usefulness for dress wear when such failure occurs.

All shirts listed had fused collars and pearl buttons, unless otherwise stated. Both workmanship of the shirt and the appearance of the fabric were good, except where otherwise noted. Shrinkage when not mentioned was within satisfactory limits. Ratings are cr47.

A. Recommended

Opera, tailored by Charing Cross (Lebanon Shirt Co., 220 Fifth Ave., New York 1) \$2.79. Thread count, 115 x 63. Type *1a* broadcloth; appearance good but slightly "neppy" (having bunches or knots). Weight per sq. yd., 3.9 oz. Tensile strength: warp, 69 lb.; filling, 41 lb. Appearance of collar after 20 launderings, good, although a slight separation and blistering on the inner side was noted after the eighteenth laundering. Workmanship, fair. Plastic buttons. **1**

Pilgrim (Sears-Roebuck's Cat. No. 33—100) \$2.41, plus postage. Thread count, 115 x 62. Type *1a* broadcloth; appearance good but slightly neppy. Weight per sq. yd., 3.7 oz. Tensile strength: warp, 75 lb.; filling, 31 lb. Appearance of collar after 20 launderings, good. Plastic buttons. **1**

Arrow, Drew (Cluett, Peabody & Co., Inc., Troy, N. Y.) \$3.25. Thread count, 114 x 63. Type *1a*. Weight per sq. yd., 3.5 oz. Tensile strength: warp, 69 lb.; filling, 37 lb. Appearance of collar after 20 launderings, good. Plastic buttons. **2**

Fruit of the Loom, tailored by Belnord (I. Janov & Co., 1199 Broadway, New York 1) \$3.25. Thread count, 135 x 62. Type *1b*; appearance good, but neppy. Weight per sq. yd., 4 oz. Tensile strength: warp, 71 lb.; filling, 47 lb.; a little low in warp but filling strength high. Appearance of collar after 20 launderings, good. **2**

Jayson (F. Jacobson & Sons, Inc., 1115 Broadway, New York 10; Montgomery Ward's Cat. No. 35—636) \$3.25, postpaid. Thread count, 115 x 56. Type *1a*; appearance good, but slightly neppy. Weight per sq. yd., 3.8 oz. Tensile strength: warp, 75 lb.; filling, 31 lb. Appearance of collar after 20 launderings, good. **2**

Manhattan, Duke Sello (Manhattan Shirt Co., 444 Madison Ave., New York 22) \$3.95. Soft collar. Thread

count, 141 x 61. Type *1b*; appearance good, but slightly neppy. Weight per sq. yd., 3.4 oz. Tensile strength: warp, 80 lb.; filling, 28 lb. **3**

Pilgrim, made of All Pima Cotton (Sears-Roebuck's Cat. No. 33—180) \$3.95, plus postage. Thread count, 183 x 87. Type *1b*. Weight per sq. yd., 3.5 oz. Tensile strength: warp, 89 lb.; filling, 44 lb. This shirt had the finest construction and highest tensile strength of the fabrics of all the shirts tested in this group. Appearance of collar after 20 launderings was good, although a slight separation and blistering on inside were noted after the seventeenth laundering. Plastic button on collar; rest were fresh-water pearl. Workmanship, fair. Collar shrank 2.5%, but was at marked size after shrinkage. **3**

B. Intermediate

Lion of Troy, Gentry (M. Nirenberg & Sons, Inc., 1140 Broadway, New York 1) \$3.95. Thread count, 137 x 59. Type *1b*. Weight per sq. yd., 3.4 oz. Tensile strength: warp, 69 lb.; filling, 27 lb. (low in warp). Appearance of collar after 20 launderings, good. Workmanship, fair. Slightly below marked sleeve measurement. Collar shrank 2.5%, but was at marked size after shrinkage. **3**

TruVal (TruVal Mfrs., Inc., 261 Fifth Ave., New York 16) \$3.95. Thread count, 135 x 67. Type *1b*. Weight per sq. yd., 3.3 oz. Tensile strength: warp, 65 lb.; filling, 27 lb. (low in warp). Appearance of collar after 20 launderings, good. Workmanship, fair. **3**

C. Not Recommended

Bond; Style Manor (Bond Clothes, 261 5th, N.Y. 16) \$2.95. Soft collar. Thread count, 104 x 61. Type *1a*; appearance only fair. Weight per sq. yd., 3.4 oz. Tensile strength: warp, 53 lb.; filling, 31 lb. (low in warp). One of two lowest fabrics

in both thread count and tensile strength of the 15 shirts tested. Workmanship, fair. Plastic buttons. **1**

Brent (Montgomery Ward's Cat. No. 35—601) \$2.98, postpaid. Thread count, 140 x 61. Type *1b*. Weight per sq. yd., 3.3 oz. Tensile strength: warp, 68 lb.; filling, 25 lb. (low in warp). Appearance of collar after one laundering, poor. Collar shrank 3%, but was at marked size after shrinkage. Plastic buttons. **1**

Art Craft (S. Liebovitz & Sons, Inc., 75 Leonard St., New York 13) \$3.50. Thread count, 106 x 64. Type *1a*; appearance only fair. Weight per sq. yd., 3.5 oz. Tensile strength: warp, 49 lb.; filling, 27 lb. (low in warp). One of two lowest fabrics in both thread count and tensile strength of shirts tested. Appearance of collar after 20 launderings, good. Workmanship, fair. Plastic buttons. **2**

Van Heusen (Phillips-Jones Corp., 1225 Broadway, New York 1) \$3.25. Thread count, 114 x 57. Type *1a*; appearance good but neppy. Weight per sq. yd., 3.9 oz. Tensile strength: warp, 73 lb.; filling, 36 lb. Appearance of collar after one laundering, poor. Workmanship, fair. **2**

Mohawk Goldspun (Superior Shirt Co., 1216 Arch St., Philadelphia 7) \$3.95. Thread count, 103 x 199. Not a broadcloth, but percale. Weight per sq. yd., 3.2 oz. Tensile strength: warp, 50 lb.; filling, 42 lb. (low but well balanced). Appearance of collar after one laundering, poor. Collar shrank 3% but was at marked size after shrinkage. Plastic buttons. **3**

Yale (Yale Shirt Co., 1239 Broadway, New York 1) \$3.98. Thread count, 139 x 60. Type *1b*. Weight per sq. yd., 3.5 oz. Tensile strength: warp, 87 lb.; filling, 31 lb. Appearance of collar after two launderings, poor. Workmanship, fair. Slightly below marked measurement in one sleeve. **3**

Infra-Red Heat Lamps—Additional Listings

A. Recommended

Branson 217x (\$5), *500* (\$6), *702* (\$7.50), *607* (\$10.50), *609* (\$15), *952* (\$24), *982* (\$27.90), and *331* (\$28.50) (M. Brandt & Sons, 58 E. 181 St., Bronx 53, N.Y.) Lamps *217x*, *500*, and *702* are rated at 260 watts and use a filament lamp heater. *607* (400 watts) and *609* (550

watts) are metal-clad types. Lamps *952*, *982*, and *331* are also 550-watt units and differ from *609* chiefly in the stand. Available with conventional porcelain socket assembly or a specially designed heating assembly, said to correct difficulty common to high-heat lamps in sockets.

THE listings of the following lamps were received too late for inclusion in our November 1947 BULLETIN article, "Infra-Red Heat Lamps," at page 23.

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ABSORBING interest in projects which require mental concentration in addition to careful and accurate craftsmanship can help materially in diverting attention of young people from interests and activities which may lead to their getting into mischief. This is an appropriate time, we believe, to make Christmas gifts of a sort that tends to give stimulus and encouragement to any young person who gives evidence of being interested in a skilled craft or a scientific or engineering pursuit.

The toy market reflects the increasing interest in mechanical hobbies; the model airplane hobby in particular appears to have lost none of its great popularity with the youngsters. Model railroad construction and operation are popular with both young and old enthusiasts, and even the manufacturers of the low-priced or "tin-plate" electric railroads now offer scale models of actual railroad equipment. Miniature racing cars and speedboats have their devotees.

Perhaps because of active participation by women in the making of war materials, an increasing number of girls appear to be showing interest in mechanical, electrical, and chemical work, and to be developing scientific aptitudes and skills. Girls now enter competitions on equal terms with their brothers, for example, in model airplane meets. Nevertheless, the great majority of little girls no doubt prefer dolls as toys.

When buying toys of plastic material, it is advisable to make

sure that the material is not flammable; some fuzzy rayon fabrics are particularly flammable, and so exceedingly dangerous for children to wear; it has even been noted that certain kinds of plastic buttons may burst into flames if worn near a hot stove or receiving strong direct radiant heat from a fireplace.

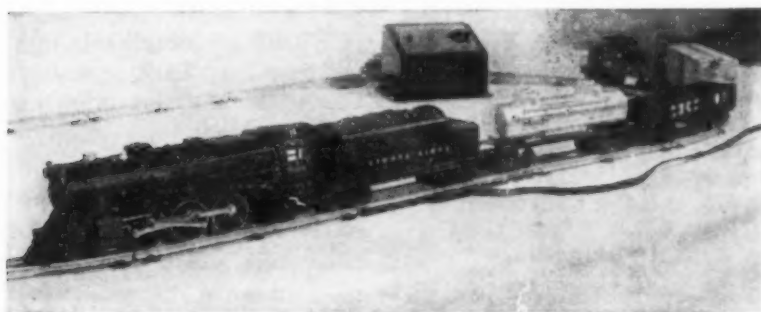
Model Airplanes

Model gliders and power-driven airplanes in kit form are available from 25 cents to perhaps as many dollars or more; working plans are available for the hobbyist who wishes to make his plane directly from the raw materials. Airplanes may be powered by rubber bands, by tiny gasoline motors, or by motors operating on compressed carbon dioxide. Motors can be purchased either completely assembled or in kit form for assembly by the purchaser; in a recent issue of Model Airplane News, advertised prices ranged from \$6.95

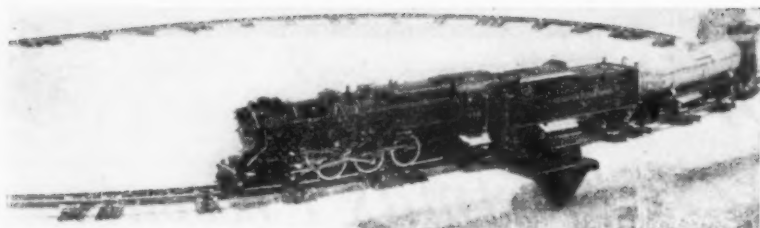
to \$55. Model planes may be flown in free flight, in controlled flight on a steel wire, or by radio control. From a 25 cent glider to a motor-powered radio-controlled model there is a wide enough range to suit any pocketbook and any taste. Flying contests for model planes are held in various parts of the country, providing competitive conditions conducive to both careful workmanship and development of original designs.

Electric Trains

Construction and operation of model railroad equipment have constituted a well-developed hobby both for young and old, for some years. In this country several sizes of equipment are available; the "O" gauge of 1¼ inches (distance between running rails), "HO" gauge of ⅝ inch, 3/16-inch scale on a gauge of slightly over ⅞ inch, the "O27" gauge which is "O" gauge track, the "27" signifying the diameter of smallest circle that can be made with this size. (With "O" gauge this is 31 inches.) It should be noted that "O" gauge track switches and crossings are not interchangeable with "O27" equipment; there is a difference of ¼ inch in the height of the rails. The smaller gauge, of course, permits more realistic layouts, particularly where space is limited. Parts can be purchased from several sources, and plans for making accurately scaled models of actual locomotives and roll-



Lionel, No. 1437WS, Train Set. \$47.50, including transformer.



Gilbert American Flyer, No. 4607, Train Set. \$29.95, less transformer.

ing stock are readily available in several magazines and books devoted to the hobby, and from dealers. Devotees of this hobby often expend very considerable sums in its pursuit.

Completely fabricated electric trains represent a beginner's approach to the model railroad hobby. They can be bought in "sets," or locomotives, rolling stock, track sections, switches, and other accessories can be purchased separately for starting or adding to a miniature railroad system. The A. C. Gilbert Co. makes the *American Flyer* line of electric trains built to a scale of 3/16 inch per foot, with a gauge of slightly over 7/8 inch. The lowest-priced complete set comprises a locomotive, 3 freight cars, 12 sections of curved track, two 10-inch sections of straight track one of which is equipped with built-in uncoupling device and control box, and a track terminal. Its price is \$14.95. The lowest-priced set furnished with the "Choo Choo" sound and "smoke" features (the latter provided by chemical pellets) sells at \$29.95, transformer extra. Operation of the train from the household a-c electric line requires a transformer which costs from \$5 to \$20, depending upon its capacity. Model trains also are available from \$37.50 up which operate only by "electronic propulsion," which rather misleading expression means only that they are operated by direct current that is supplied by a unit which includes an electronic rectifier tube; d-c operation provides means for reversing the direction of operation of trains by remote control on the 2-rail track used with *Gilbert* trains. "HO" gauge trains

are also available from this company. The Lionel Corporation makes a line of trains in "O" gauge and "O27" gauge, which operate on a 3-rail system. The lowest-priced complete "set" consists of a locomotive, 3 freight cars, and enough track to make an oval 36 inches by 27 3/8 inches; the price of the train is \$22.50, including 60-watt transformer; the same set but with built-in whistle and 75-watt transformer lists at \$27.50. The cheapest set with smoke and built-in whistle lists at \$41. Lionel offers at \$75 an "electronic control" train set "operated through the magic of radio frequency waves," which gives control over separate cars. For those who may question the complete safety of a train operated from 110-volt electric lines through the customary step-down transformer, a *Schilling* electric train operated on 4 flashlight cells is available; Macy's in New York City offer this at \$12.94. Sears-Roebuck and Montgomery Ward catalogs show *Marx* electric trains priced at \$14.95 and \$21.95, respectively.

The following ratings are based on a critical examination only.

A. Recommended

American Flyer Train Sets (The A.C. Gilbert Co., Erector Square, New Haven, Conn.) 3/16 scale 2-rail sets, \$14.95 to \$159.50 for a complete railroad system, less transformer.

Lionel Train Sets (The Lionel Corp., 15 E. 26 St., New York 10) "O27" gauge sets, \$22.50 to \$70, including transformer. "O" gauge sets, \$35 to \$75, including transformer.

B. Intermediate

Marx Train Sets (Louis Marx & Co., 200 Fifth Ave., New York 10)

\$12.98, \$15.98, and \$19.98, including transformer.

Schilling Battery-Operated Train (Distributed by R. H. Macy & Co., N.Y.C.) \$12.94, including batteries.

Tools

Model makers' tools which have become popular include *Exacto*¹ knives and small hand tools, and small hand grinding, cutting, and marking tools powered by motor or vibrator; the latter include *Handee* (\$20.50 up), *Casco Motor Tool* (\$22.50), *Dremel Moto Kit Tool* (\$23.50), and *Burgess Deluxe Vibro Tool* (\$16.50).² The regular hand tools for children's use (saw, hammer, plane, calipers, etc.) can be of ordinary or standard grade as made for home use, rather than the superior tools intended for skilled mechanics. These are probably best purchased separately in hardware stores rather than in the sets offered, some of which appear to be of dubious value.

Construction Sets

Construction sets are available in wide variety from several makers; some are of metal, some of plastic, and some of wood. For younger boys, the A. C. Gilbert Co., New Haven, Conn., makes wooden sets at \$1.95 to \$5.95; metal sets without motor, with spring motor, and with electric motor, at \$3 to \$25, for boys old enough to have developed more mechanical sense; "brik" sets of simulated bricks, which may be used as building toys by younger boys and girls and in connection with the metal sets, to provide added realism. Metal sets are offered by Lionel Corporation, 15 E. 26 St., N.Y.C., at \$3.95 to \$15.75. Construction sets made of plastic are obtainable in various sizes from \$5.50 upward from Cinderella Manufacturing Co. of Jackson, Mich.

¹X-acto Crescent Products Co., 440 Fourth Ave., New York City.

²Handee (Chicago Wheel & Mfg. Co., 1101 W. Monroe St., Chicago 7)

Casco (Casco Products Corp., Bridgeport 2, Conn.)

Dremel (Dremel Mfg. Co., Racine, Wis.)

Burgess (Burgess Battery Co., 178 N. Wabash Ave., Chicago 1)



Gilbert, No. 6A, Chemistry Set. \$6.95.

Chemistry Sets

Chemistry sets are available from A. C. Gilbert Co., New Haven, Conn., at prices ranging from \$1.50 to \$22.50, and from Lionel Corporation at \$1.95 to \$13.75. A chemistry set may be an unsafe toy in the hands of a child below high school age, and it is doubtful whether a child will often learn much of lasting value from playing with such a set. The experiments described in the books which are supplied with the sets are really little more than "stunts." Obtaining real educational value from chemistry toys requires that they be designed by careful, experienced chemists who know how to teach, and used in connection with a book on elementary chemistry, such as the textbooks used in high school classes.

Microscope Sets

Simple microscope sets like those supplied by A. C. Gilbert Co., New Haven, Conn., at \$2.95 to \$14.95 offer no hazard, and are of some value in teaching a child the rudimentary theory of microscopy. (It may be that in some cases, the chemicals furnished might involve an element of danger to the young child.) Use of a microscope can arouse curiosity which may lead to a lasting interest in scientific studies.

Wheel Toys

Toy trucks, automobiles, and

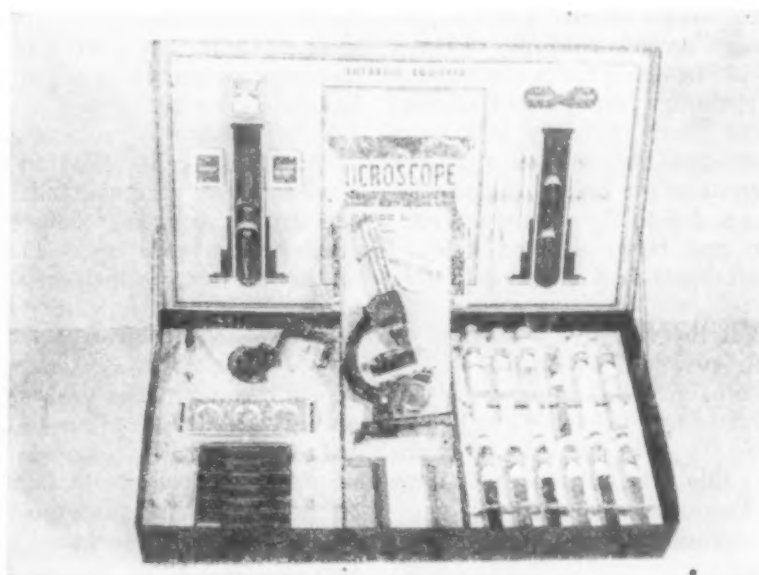
similar toys are in fairly good supply in several grades and selling over a considerable price range in mail-order houses and retail stores. In the moderate price range are those made by Structo Manufacturing Co. of Freeport, Ill., selling between about \$2.75 and \$5.95. Well-made but high-priced toys which are stated to be replicas of standard equipment are the concrete mixer, earth hauler, and bucket loader by Charles Wm. Doepke Co. of Cincinnati, Ohio, priced at \$10.75 to \$13.75. Well-made trucks with die-cast aluminum frames and bodies of metal or wood, said to be

replicas of actual trucks of standard makes, are offered by Smith-Miller, Inc. of Santa Monica, Calif., in a price range of \$4 to \$10.

Of the larger steel toys, scooters are available at from \$3.98 (mail-order houses) upward; tri-cycles from about \$5 to as much as \$50. Wooden coaster wagons can be had at from \$8 to about \$25 or perhaps even more; metal wagons are scarce because of the steel shortage, with a few being shown in some stores at from about \$15 upward.

Dolls

Dolls are available in all the old familiar materials and in rubber and some plastics. Composition dolls are offered by mail-order houses and in retail stores at prices from less than \$1 to almost any figure that a customer may be induced to pay. The *Effanbee* line of dolls (Fleischaker & Baum, 200 Fifth Ave., N.Y. 10) is well-known, and a list of that line may be taken as representative of what is offered in the medium to better grades: (1) *Dy-Dee Drinking-Wetting Doll*, made of solid rubber (which may make it too heavy for many children), sleeps or stays awake when lying down, blows soap bubbles, etc., priced \$7.95 and upward, depending upon



Gilbert, No. 6, Microscope Set. \$5.95.

size and clothes; (2) *Sweetie Pie*, composition doll with washable wig, \$9.95 to \$17.95; (3) *Satin Skin*, made of latex rubber, priced at \$5.95 to \$9.95; (4) fine quality composition doll in one size only, priced \$7.95 to \$45 depending upon clothes; (5) *Mickie* doll, stuffed, priced \$4.95 to \$10.98 depending upon clothes.

A novelty which should be of value in teaching girls painlessly the rudiments of sewing is the *Fashiondoll* (Fashiondoll, 200 Fifth Ave., New York 10). The smallest "set," priced \$2.19, includes a 13-inch rubber doll mannikin with painted base to hold it upright, three *Simplicity* dress patterns, a small sewing book, and material for one dress. Each of the higher-priced sets includes also a dress form with supporting standard,

the full-size *Simplicity* Sewing Book, and some sewing accessories. The two higher-priced sets have 16-inch doll mannikins.

A variety of plastic and stuffed dolls and animals is available for younger children and babies at from 29c to \$10 or even higher, depending upon materials, quality, and size. Some of them are distinctly unsafe (easily broken, colored with fugitive dyes; etc.), but the better grades of toys for very young children usually bear helpful descriptive tags. In view of the scarcity and high cost of new cotton, some stuffed toys may be filled with reused material, which might be contaminated and unsafe for a child to handle.

Craft Supplies

For a child who displays artistic

tendencies, suitable gifts may be chosen from the supplies and tools for the various handicrafts. Some of the handicrafts which have been introduced in recent years include work with Lucite, Plexiglas, and other plastics; rubber-mold casting; making of pottery articles with clay which hardens without firing; finger painting. Older crafts that are still popular include basketry, wood carving, leather carving and ornamentation, making of jewelry and other articles of metal, linoleum-block printing, and the like. The catalog of American Handicrafts Co., Inc., 45-49 S. Harrison St., East Orange, N. J., lists many supplies and tools for handicrafts. Some of the tools and materials listed may perhaps be purchased in various stores at lower prices.

★ ★ *Christmas Tree Lamps* ★ ★

PRESENT PROSPECTS are that there will be at least some choice as to lamps to light your Christmas tree this year. In addition to the usual incandescent types, there will be the *Bubble-lites*, which appeared for the first time last year, and the fluorescent tree lamps. (There may also be other lamps of the "gaseous discharge" type.) All types of bulbs should be available in some quantity, though from present appearances there probably will be a shortage of the cord sets to supply current to the bulbs. This situation is due to the shortage of copper and the continued government control of supplies of this metal.

CR reports have from time to time reviewed the status of the various makes and types of incandescent Christmas tree lamps. This status is likely to be modified this year only in that lamps will probably be chiefly of domestic manufacture. Last Christmas season saw some lamp bulbs from China and Japan, though obvious-

ly of poor quality and short life—and at the high prices of 20 to 25 cents each. Since lamp sets in some instances are wired to operate lamps in series and in other cases in parallel or multiple, it is important that only the right type of lamp be gotten for replacement purposes. The two types of lamps are distinguishable through their different sizes of screw bases, as lamps for the series-wired sets have smaller bases.

While speaking of replacements, attention is again called to the need to make sure that all cord sets are *in good order* before installing them on a tree. This is one application in which attempts at repairs involve a definite hazard. *Do not attempt to patch up an old Christmas tree lighting set.* It will be much wiser to do without lights on the tree than to take the risk of using repaired, improvised, or homemade lighting equipment on a tree. More than one serious fire has occurred from this cause. Candle lighting of a tree should, of course, never be re-

sorted to, as the fire hazard with candles is very great, and uncontrollable.

The fluorescent Christmas tree lamps that were available last year are designed for multiple (parallel) operation, and may be used in the same cord sets as the multiple-burning type of incandescent lamps. Each lamp is a complete operating circuit, somewhat similar to the larger fluorescent lamp circuits used for general lighting, in that it consists of a bulb coated inside with a phosphor or fluorescing material which is activated by an electric discharge within the bulb. (The ballast is a resistor built into the base of the lamp.) These lamps, however, do not contain mercury, as standard fluorescent lamps do, and the electric discharge is of the glow type rather than an arc. The lamps are not as bright as the other fluorescent lamps which are widely used for general lighting, and they are available only in the pastel shades (pink, blue, green, etc.). The

fluorescent tree lamps that have been available have been spherical in shape.

In comparison with the incandescent types, the fluorescent Christmas tree lamps are considerably more expensive. The probable price for a string of seven fluorescent lamps this year is around \$5. The usual guaranteed life of the fluorescent tree lamp is well above that of the incandescent types, and such test data as have been available would indicate the life to be very high—average probably above 5000 hours. Operating cost—though usually considered unimportant in Christmas tree lighting—would be favorable to the fluorescent lamp.

Aside from first cost, the choice of lamps should be on a basis of the effect desired. The usual incandescent lamps produce small areas of high brightness while the fluorescent lamps, which are large in diameter (approximately 2 inches), produce large areas of relatively low brightness. With incandescent lamps, a candle-like effect is produced, with points of light that cause other ornaments to glisten, and the illumination can be quite effective even though the general room lighting is at a relatively high level. The low brilliance of the fluorescent lamps is most effective in a room in which the general lighting is subdued. The colors in the incandescent types are bright. The fluorescent lamps are in pale tints. The well-known *Bubble-lites* put an element of motion into the lighting. Which type to use is chiefly a matter of personal taste, but it is well to bear in mind that the lamps are definitely not interchangeable as to the effects produced.

Boxes of Christmas tree lighting sets may lack the name of the manufacturer or his address. In view of the fire and shock hazard often associated with these lamps due to poor design or careless manufacture and inspection, it is important that the consumer should not buy a brand that does

not give full information about the manufacturer. A number of boxes will give the impression that the strings are made by the General Electric Co., when actually only the lamp bulbs are GE products. In future years only a C rating can be given to lamps which are so designed that tinsel might make accidental contact with the lamp shell or socket interior. (There is no good reason why lamp manufacturers should not make sure that their lamp sets are completely and carefully safeguarded at the point referred to.)

For the convenience of our subscribers, one 1946 rating of Christmas tree lighting sets has been repeated, since sets of this number are still available in retail stores. Other ratings are cr47. Except where noted, all sets had add-on receptacles or plugs for additional sets of lights, and made provision for attaching individual sockets to the tree.

A. Recommended

Miller, Outdoor-Indoor No. 100, String O'Lights (Miller Electric Co., Pawtucket, R. I.) \$5.24, including tax. Extra bulbs, 48c each, including tax. Multiple-wired, 7 *Sylvania* fluorescent bulbs, each of which uses 4 watts. Small plastic washers were provided to fill the spaces between the socket shells and lamp bases so that string tinsel could not make electric contact (good design). Examined for indoor use only.

Noma, 15-Light Decorative Outfit No. 3415 (Noma Electric Corp., N.Y.C.) \$5.90, with GE lamps. Multiple-wired, fifteen 120-volt bulbs. cr46

B. Intermediate

Amico, No. A (Manufacturer's name not given but UL listing indicates Noma Electric Corp. is maker) \$1.29, with GE lamps. Series-wired, eight 15-volt bulbs. Listed under Underwriters' Laboratories' Reexamination Service. Tinsel could make electrical contact with socket shells. Did not have add-on plug for additional sets or means for attaching sockets to tree.

Amico, No. 701 (Manufacturer's name not given, but plugs marked "Noma") \$3.19, with GE lamps.

Listed under Underwriters' Laboratories' Reexamination Service as No. M. Tinsel could make electrical contact with socket shells. No means provided for attaching sockets to tree. Socket opening for wire sealed with a compound, giving stress relief and keeping tinsel out.

Clemco, No. 505 (Clemco Inc., Hillside, N.J.) \$1.98, with GE lamps. Series-wired, eight 15-volt bulbs. Listed under Underwriters' Laboratories' Reexamination Service. Tinsel could make electrical contact with socket shells. Sample examined had defective extension plug—openings in plug were too small, until subjected to pressure of plug prongs, to accept another plug.

Gem (Gem Electric Mfg. Co., Inc., Bush Terminal, Brooklyn, N.Y.) \$1.98, with GE lamps. Series-wired, eight 15-volt bulbs. Sockets were so shallow that the socket shells of the lamps were easily visible and tinsel could make electrical contact with socket shells. No means provided for attaching sockets to tree.

Glolite, No. 186C (The Glolite Corp.) \$1.98, with GE lamps. Series-wired, eight 15-volt bulbs. Tinsel could make electrical contact with socket shells. Did not have add-on plug for additional sets.

Good-lite, No. 40 (Good-lite Electric Mfg. Co., Bridgeport, Conn.) \$1.80, with GE lamps. Series-wired, eight 15-volt bulbs. Tinsel could make electrical contact with socket shells. No means provided for attaching sockets to tree.

Goodlite. \$3.75, with GE spherical lamps, about 1 3/4 in. in diameter. Multiple-wired, seven 120-volt bulbs. Tinsel could make electrical contact with socket shells. No means provided for attaching sockets to tree. Set examined had a few strands of wire sticking out from one side of plug (careless assembly).

Montgomery Ward's Cat. No. 48—150. \$1.57, plus postage, with ten GE bulbs. Series-wired, eight 15-volt bulbs. Tinsel could make electrical contact with socket shells.

Noma, No. 110 (Noma Electric Corp.) \$1.98, with GE lamps. Series-wired, eight 15-volt bulbs. Carton claimed sets were listed under Underwriters' Laboratories' Reexamination Service, but cord did not carry such a label. Electrical contact could easily be made by string tinsel touching socket shells. Of two sets examined, one did not have an add-on plug for additional sets.

Noma Bubble-lites, No. 509 (Noma Electric Corp.) \$4, with lamps. Extra lamps, 35c each. Series-wired, nine 15-volt *Bubble-lites*. *Bubble-lites* are small incandescent lamps to which tubes containing colored liquid and a small piece of glass rod have been cemented. A colored plastic globe surrounds the lamp bulb and the lower part of the tube. Sockets were deep, but it was nevertheless possible for tinsel to make electrical contact with socket shells.

Park, No. 707 (Bellite Mfg. Co.) \$3.25, with GE lamps. Multiple-wired, seven 120-volt bulbs. Wire had tag listing the device under the Underwriters' Laboratories' Reexamination Service. Tinsel could make electrical contact with socket shells. No means provided for attaching sockets to tree.

Pennant, No. 1301K (Paramount 103) (Raylite Electric Corp., Bronx, N.Y.) \$1.69, with GE lamps. Series-wired, eight 15-volt bulbs. Listed under Underwriters' Laboratories' Reexamination Service. Tinsel could make electrical contact with socket shells.

Reliance (N.Y. Merchandising Co., N.Y.C.) Not boxed, but identified as *Reliance* by seller. \$2.98, with GE lamps. Multiple-wired, seven 120-volt bulbs. Sockets were deep, but it was possible for tinsel to make electrical contact with socket shells. No means provided for attaching sockets to tree.

St. Nick, No. 68 (Hy-G Products Co., Los Angeles 11) \$1.93, with *Westinghouse* lamps. Series-wired, eight 15-volt bulbs. Listed under Underwriters' Laboratories' Reexamination Service as *No. 1000*. Tinsel could make electrical contact with socket shells. Did not have add-on plug for additional sets or any means for attaching sockets to tree.

Sterling, No. 1100K (Raylite Electric Corp.) \$2.49. Multiple-wired, 7 120-volt bulbs. Listed under Underwriters' Laboratories' Reexamination Service as *Paramount 107*. Tinsel could make electrical contact with socket shells.

Timco, No. 101 (The Thomas Co., N.Y.C.) \$1.89, with GE lamps. Series-wired, eight 15-volt bulbs.

Listed under Underwriters' Laboratories' Reexamination Service as *No. 201-A*. Tinsel could make electrical contact with socket shells. Did not have add-on plug for additional sets or any means for attaching sockets to tree.

* * *

Reliance, No. 117. \$1.98, with *Westinghouse* lamps. Series-wired, eight 15-volt bulbs. Listed under Underwriters' Laboratories' Reexamination Service as *Reliance No. 2*. Tinsel could make electrical contact with socket shells. No means provided for attaching sockets to tree. Wire was easily pulled from one of the sockets in the set examined.

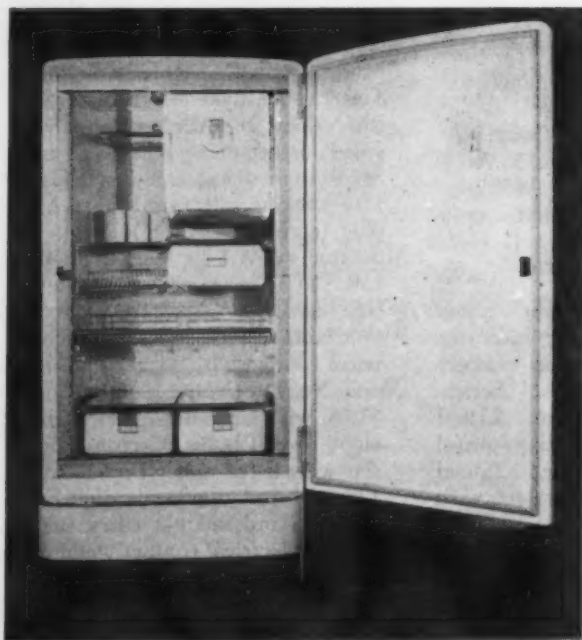
C. Not Recommended

Royal, No. 102KA (Royal Electric Co., Inc., Pawtucket, R.I.) \$1.98, with GE lamps. Series-wired, eight 15-volt bulbs. Listed under Underwriters' Laboratories' Reexamination Service as *100-SA*. Tinsel could make electrical contact with socket shells. Insulation of wire easily loosened to expose bare wire at socket in set examined.

Report on a Hotpoint (and a GE) Electric Refrigerator

A. Recommended

Hotpoint, Model 12EC8-1 (Edison General Electric Appliance Co., Inc., Chicago) \$299.75. Rated capacity, 8.1 cu. ft. (actual, 7.7 cu. ft.). Shelf area, 14.9 sq. ft. Compressor, sealed type. Condenser, finned-tube type



Hotpoint, Model 12EC8-1

built into a duct mounted at rear of cabinet, and cooled by natural circulation of air. Refrigerant, *Freon 12*, flow of which is controlled by a capillary tube. Equipped with 2 full-sized shelves, one of which is of glass, divided into two parts, and

the other a sliding shelf of stainless steel wire. Three smaller shelves of stainless steel wire are located at the left-hand side of the box, one of these being divided into a stationary part while the other part is in the form of a basket, which pivots outward at one end. Below the glass shelf are 2 vitreous-enameled steel drawers, one marked "Vegetables" and the other "Fruit." Another vitreous-enameled steel drawer marked "Meat" is located below the shallow glass drip tray of the evaporator. Evaporator (storage capacity, 1 cu. ft.), lo-

cated at upper right-hand corner of box, refrigerated at bottom, sides, and under upper shelf. Second shelf is removable, leaving a space $9\frac{1}{2}$ in. high, which is sufficient for the storage of about 30 lb. of frozen food. "Defrost" indicator. Four ice-cube trays to make 80 cubes (7 lb.) of ice. Cabinet finished in white lacquer; food compartment, sheet steel finished in white vitreous enamel; inner surface of door of white polished plastic material. Lacked a bin for non-refrigerated storage. Time required to lower temperature to a stable value (39°F) with room temperature at 90°F and control set at *N*, 10 hours with energy consumption of 0.62 kwhr., corresponding to 2.2c worth of electricity. Cost of operation at 90°F room temperature with an average temperature of 43°F inside box, 91c per month. (On a per cu. ft. basis, this would be 11.8c, compared to 11.2c per cu. ft. per month for the 7.2 cu. ft. *General Electric*, Model BH7-A, and 12.4c per cu. ft. per month for the 7.8 cu. ft. *Coldspot Four Star*, reported in Consumers' Research Bulletin, September 1947.) With temperature control set at 9 (coldest position), time required to freeze 7 lb. of ice

cubes: trays 1 and 2 at top, about 2¼ hours; tray 3 on non-refrigerated shelf, about 4½ hours; tray 4 at bottom, about 2¼ hours. Motor ran 95% of the time during the period of

freezing cubes. Temperature in cabinet during freezing period: maximum, 48.5°F; minimum, 31.8°F. Cost of energy consumed during freezing period, 2½¢, or about the

same as the *Coldspot Four Star*, General Electric, Model ND-8D (General Electric Co., Bridgeport, Conn.) \$299.75. Essentially the same as *Hotpoint*, Model 12EC8-1.

Sheets—Muslin, Percale, and Fine-Count Muslin

SHEETS are back again on the store shelves, but with such luxury-item price tags that only those who must will feel justified in buying sheets beyond their immediate needs at this time.

The eleven samples purchased included one medium, one lightweight, and three heavyweight muslins, three fine-count muslins, and three true percales. To some extent labeling seemed to have gone backward rather than forward since CR's pre-war tests, for of the several brands only Pacific's *Facbook* label gave adequate information to the prospective

buyer. The fine-count muslins were all labeled *percale*, but two—the *Cannon Cavalier* and the *Pepperell*—were also marked *Type 180*. This somewhat confusing state of sheet labeling may be a holdover from OPA days, when four types, named for the total number of threads per square inch, were recognized. For the benefit of consumers, it is to be hoped that there will be a return to bases used in the American Society for Testing Materials' Tentative Standard D-503-40T, physical requirements of which are as tabulated in the accompanying table.

Sheet characteristics expressed by the ASTM method leave no question as to thread count in both the warp and filling directions; five types are given names which mean something to the consumer; and the amount of sizing for fine quality sheets is limited to a reasonably low percentage, instead of the excessive allowances that were permitted in the OPA standard.

As may be noted in the table, heavyweight muslin sheets have greater tensile strength and may, therefore, be expected to have longer life in service than any of the other types. Their

Requirements For Bleached Wide Cotton Sheeting (Finished)

| | Type 1 Percale | Type 2 Fine-Count Muslin | Type 3 — | Type 4 Heavy- weight Muslin | Type 5 Medium- Weight Muslin | Type 6 Light- weight Muslin |
|--|-------------------|--------------------------------|-------------|--------------------------------------|---------------------------------------|--------------------------------------|
| Character of yarn..... | combed | combed or carded | carded | carded | carded | carded |
| Count, min., yarns per in. | | | | | | |
| Warp..... | 104 | 94 | 84 | 74 | 68 | 56 |
| Filling..... | 98 | 84 | 80 | 66 | 60 | 56 |
| Weight, oz. per sq. yd. | | | | | | |
| maximum..... | 4.0 | 4.0 | 4.0 | — | — | — |
| minimum..... | 3.6 | 3.7 | — | 4.6 | 4.2 | 3.9 |
| Breaking strength, minimum, lb. (Grab test) | | | | | | |
| Warp..... | 60 | 60 | 50 | 70 | 60 | 50 |
| Filling..... | 60 | 60 | 50 | 70 | 50 | 45 |
| Sizing, maximum, percent.... | 1.0 | 1.0 | 1.0 | 2.0 | 5.0 | 8.5 |

weight, however, makes them more expensive to launder than percale if sent to a commercial laundry which charges by weight. Percales are smoother and more luxurious than muslin and are generally preferred to heavyweight muslins. In spite of their considerably larger first cost, there is some practical justification for buying percales where a considerable amount of money can be saved in laundry charges. However, with the present soaring prices and the need of most homemakers to buy as economically as possible, it would seem more practical, though not so luxurious, to purchase a good medium-weight muslin of about the same weight as percale. These have nearly as high tensile strength, and cost approximately half as much as the percales. Fine-count muslins (so-called utility percales) are also practical buys; they are much better looking than medium-weight muslin sheets; they weigh no more—sometimes less—than percales; they have, on the whole, about the same tensile strength; and they sell at prices only slightly higher than heavyweight muslin. Weight per square yard of the material, as measured, is given in each listing following the identification of the type of fabric, to facilitate the housewife's estimating comparative economy in laundering.

The ASTM standards already mentioned were used as the basis for ratings. Thread counts were found well balanced and above prescribed minimums in all instances. Lengthwise shrinkage of 5% has been used as the limit, as it seems to be a rather generally accepted figure. In each case, percentage of sizing was

within the limits set by the ASTM Tentative Standard as shown in the table, unless otherwise noted. Ratings are cr47.

Results of this test were rather surprising, in that there were no unsatisfactory sheets among the 11 tested; in previous years there have commonly been four or more sheets of unsatisfactory quality in any group of this size.

A. Recommended

Cannon Cavalier, Percale, Type 180 (Cannon Mills, Inc., 70 Worth St., New York 13) 81 x 108, \$3.34. Labeling misrepresented this sheet, which was not a true percale, but a fine-count muslin; 3.7 oz. (lightest sheet tested). Tensile strength satisfactory for this type according to the ASTM table in text, but appreciably below that of the heavyweight muslin sheets tested. Warp shrinkage satisfactory; lengthened slightly in the filling direction rather than shrank, in test. 2

Indian Maiden, Combed Percale (Nashua Mfg. Co., Nashua, N. H.) 90 x 108, \$3.35. Labeling misrepresented this sheet, which was not a true percale, but a fine-count muslin; 4 oz. Tensile strength nearly equal to that of heavyweight muslin sheets tested. Shrinkage, satisfactory. 2

Wamsutta Supercal (Wamsutta Mills, New Bedford, Mass.) 90 x 108, \$6.50. A true percale; 3.75 oz. Tensile strength excellent, only slightly less than that of the heavyweight muslin sheets tested. 0.3% sizing, smallest percentage of the sheets tested. Shrinkage, satisfactory. 3

* * *

The following sheet is given a qualified *A-Recommended* rating; its shrinkage was above the accepted limit.

Pacific, Heavy Quality, Type 140 (Pacific Mills, 214 Church St., New York 13) 90 x 108, \$3.25. Heavyweight muslin; 4.9 oz. Highest tensile strength in both warp and filling of sheets tested. Shrinkage somewhat above accepted limit. *Facbook* accompanying sheet gave adequate buying information. 2

B. Intermediate

Cannon Corinthian, Type 128 (Cannon Mills) 90 x 108, \$2.98. Medium-weight muslin; 4.4 oz. Tensile strength well above minimum for this type. Contained 3.8% sizing, which was well below maximum limit for the type, but considerably higher than in sheets rated *A. Recommended*. Shrinkage, satisfactory. 1

Mohawk (Utica & Mohawk Cotton Mills, Inc., Utica, N.Y.) 81 x 108, \$2.74. Lightweight muslin; 3.8 oz. Tensile strength well above minimums for the type, but warp and filling strengths considerably out of balance (undesirable). 2.1% sizing—very low for the type. Shrinkage, low, least of sheets tested. 1

Golden Gate (Marshall Field & Co., Inc., Mfg. Division, New York City) 90 x 108, \$3.29. Heavyweight muslin; 4.8 oz. Tensile strength satisfactory. 2.4% sizing, somewhat above limit for this type. Shrinkage, somewhat above accepted limit. 2

Pepperell, Percale, Type 180 (Pepperell Mfg. Co., Boston) 81 x 108, \$3.34. Labeling misrepresented this sheet, which was not a true percale, but a fine-count muslin; 4 oz. Tensile strength very good. 1.6% sizing, above limit for the type. 6.2% shrinkage—excessive, and highest of sheets tested. 2

Treasure Chest, Type 140 (Montgomery Ward's Cat. No. 16—3307) 90 x 108, \$3.19, plus postage. Heavyweight muslin; 4.8 oz. Tensile strength excellent. 3% sizing—above the limit for the type; shrinkage somewhat above accepted limit. 2

Castle Bower, Percale De Luxe (Fruit of the Loom, Inc., Providence, R. I.) 90 x 108, \$6.50. A true percale; 4.2 oz., practically as heavy as the medium-weight muslin *Cannon Corinthian*. Tensile strength well above minimum requirements for the type, but warp and filling strengths badly out of balance (undesirable). 1.2% sizing, slightly above limit. Shrinkage somewhat above accepted limit. 3

Utica, Percale (Utica & Mohawk Cotton Mills, Inc.) 81 x 108, \$5.10. A true percale; 3.8 oz. Tensile strength well above minimum for the type, but warp and filling strengths considerably out of balance. Shrinkage, satisfactory. 3

The Brush Soundmirror—A Magnetic Tape Recorder-Reproducer

MANY readers of CR's BULLETINS have written in to inquire about the performance of the new magnetic tape and wire recorders. There are many of these being advertised, and the advertising naturally sounds quite attractive. Many have jumped to the conclusion that wire or tape recorders are going to take the place of the phonograph and render the disk records obsolete. CR thinks this is very unlikely within the foreseeable future, and our advice, based admittedly on what is at present a necessarily limited knowledge of the field, is that consumers will do well to await further improvements and much lower prices on this type of equipment unless they are in a position to make a considerable investment—without much mind-ing a loss if what they have bought turns out to be unsatisfactory.

The new type of recorder consists basically of a microphone and an electronic circuit which transcribes the microphone input (speech or music) onto a paper tape which has been specially treated by coating with a magnetic material, or puts it on a wire made of a special magnetic alloy. This results in a semi-permanent rearrangement or reorientation of the magnetic particles in the tape or wire; and this configuration is later used to influence the voltages delivered to another electronic circuit, which converts the impulses set up as the recording medium is scanned, back to audible frequencies which can be heard through a loud-speaker.

The unit discussed in the present study gave satisfactory quality of voice reproduction. For this reason it might be satisfactory for use in business in making a permanent record of a conference, an interview, or the like. The *Soundmirror* did not seem fully suited for use as a dictating medium for office purposes be-



Soundmirror, Model BK 401

cause it did not provide convenient means, that are important for such use, for marking the tape at given points so that separate letters or parts of the dictated material could be transcribed at will. This is a feature, and a very necessary one, of the machines presently designed and marketed for use in practical office dictation. The *Soundmirror* was, however, better suited to dictation work than the two wire recorders tested, and some might find its use for office or home dictation purposes not too inconvenient.

The *Soundmirror* was tried on the recording of orchestral music, symphonies, and other high-quality musical performances directly from the radio, but the quality of its reproduction of this type of material was found to be definitely limited (comparable with a medium-sized table-model radio receiver). Apart from the limited over-all frequency response of the *Soundmirror* recorder itself, there is also a limitation in practical use

that all but the most expensive and carefully adjusted radio receivers provide only a very poor quality of audio output to be used as the input of the *Soundmirror*. Even when used with a first-class console AM or FM receiver, the limitations of the *Soundmirror* as to its own output circuit, etc., would reduce the desirability of the *Soundmirror* for making tape transcriptions. Present consumer trends toward better equipment for listening and actual possibilities of high-fidelity reproduction suggest that equipment for recording directly "from the air" should be of a considerably higher grade than now seems to be available at any price level which any average consumer would consider reasonable.

A test is under way on a *Sears Roebuck Combination Radio-Phonograph-Wire Recorder* and a *Webster Wire Recorder*, and these will be reported on as soon as the data are in hand.

B. Intermediate

Soundmirror, Model BK 401 (Brush Development Co., Cleveland) \$229.50, including microphone. Extra rolls of recording tape, running 30 minutes, \$2.50 each. For 110-volt 60-cycle operation (desirable). Power consumed, 150 watts. Cabinet made of thin wood with walnut finish (size, 11½ in. high, 17¾ in. wide, 13¾ in. deep). Weight, 40 lb. Provision made on chassis for direct wire connection to radio or phonograph to permit recording radio programs or from disk records. 9 tubes used, including rectifier and tuning indicator. Speaker was a 7½ in. permanent-magnet type. Recording tape take-up motor made by General Instrument Co. (Makers of rewind motors not indicated.) Erasing circuit and mechanism were provided for restoring the magnetic tape to its initial condition, and this was found to function satisfac-

torily. The smaller chassis, which contained the recording amplifier, the playback preamplifier, and the erasing circuit, was very crowded with parts and wiring. The power supply-power amplifier chassis, however, was well constructed and well laid out. It is considered that the over-all problem of maintenance might be a difficult one. Quality of reproduction of voice (which calls for only a limited range of audio response) was satisfactory, while tone quality for recorded music was about on a par with that provided by an average, medium-sized table-model radio. Distortion was 5% to 10% for most reproducing levels below 1 watt when recording was at the maximum level (inadequate for musical fidelity). Test results indicated, however, that the distortion was, for the most part, definitely related to recording level input, and not determined by the power output (volume level) of the unit. On

this account, distortion in the output could not be reduced by reducing the gain (volume), if the initial recording had been made at too high a level. Maximum power output was 1.8 watts, with considerable distortion. The signal to noise ratio at maximum recording level was about 35 db. (mostly hum and corresponding to definite—and too high—audibility of the noise background). Frequency response varied from 50 to between 3000 and 7000 cps. (electrical) depending, like the distortion, upon the position of the recording gain control. As a result of a fault of design, the entire unit became very warm after 30 to 60 minutes' use. (The temperature of the take-up motor rose to above 212°F and a "hot smell" was quite evident inside the cabinet.) ¶Although the controls are complicated, the unit was easy to operate after a little practice.

Off the Editor's Chest

[Continued from page 2]

Attorney General Clark has been making news with his current series of antitrust suits, on which it is reported that 160 Department of Justice attorneys have been working overtime. The cynical-minded observer, however, will wonder why the Attorney General who has called for jail sentences for those who "conspire to maintain or increase prices" does not focus his interest on the nearby U.S. Department of Agriculture building where decisions to maintain or increase prices are being made constantly, and where those decisions affect everyone who buys food and clothing, because there is no escaping the results of the government's far-reaching efforts to keep consumers from buying necessities at the lower prices that would be established in a free

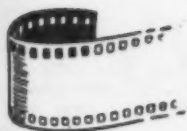
market.

Perhaps the catch may be in the term "conspire" for U.S. Department of Agriculture officials are wont to answer plaintively that they are compelled by law to keep the price of farm products up. This is true in a sense, but is not sincerely meant, of course, for the Department of Agriculture suggests and drafts the laws which Congress enacts in the agricultural-price-maintenance field.

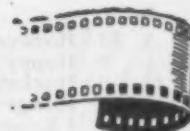
If consumers really want to work actively at getting prices of food down, one thing they can do is to make their congressmen and senators understand that every sort of price support for farm and other products should be discontinued when the legislation comes up for renewal, some of it this next year. Those who

have loudly complained about high prices of food to their friends and neighbors, hoping that in the long run some beneficent government bureau would do something about the problem, will better serve their own interests by giving up wishful thinking and by making known their desire to have the government get out of the business of fixing and raising prices both by indirection and openly, as the occasion seems to justify.

In the meantime, let everyone who knows the situation give publicity to the fact that while the government upbraids those who charge high prices for what they sell, it is itself daily and busily engaged in *preventing* the sale of essential goods of daily living, at the lower prices they would sell at in a free, competitive market.



Ratings of Motion Pictures



THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Box Office, *Charm*, *Chicago Daily Tribune*, *The Christian Century*, *Cue*, *Daily News* (N.Y.), *The Exhibitor*, *Harrison's Reports*, *Motion Picture Herald*, *National Legion of Decency List*, *Newsweek*, *New York Herald Tribune*, *New York Times*, *Parents' Magazine*, *Release of the D.A.R.*, *Preview Committee*, *Successful Farming*, *Time*, *Variety* (weekly), and *Unbiased Opinions of Current Motion Pictures* which includes reviews by the General Federation of Women's Clubs, the American Legion Auxiliary, National Film Music Council, and others.

The figures preceding the title of the picture indicate the number of critics who have been judged to rate the film A (recommended), B (intermediate), and C (not recommended) on its entertainment values.

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

| | |
|---|---|
| adv—adventure | hist—founded on historical incident |
| biog—biography | mel—melodrama |
| c—in color (Technicolor, Cinecolor, Trucolor, Magnacolor, or Vitacolor) | mus—musical |
| car—cartoon | mys—mystery |
| com—comedy | nov—dramatization of a novel |
| cri—crime and capture of criminals | rom—romance |
| doc—documentary | soc—social-problem drama |
| dr—drama | trap—travelogue |
| fan—fantasy | war—dealing with the lives of people in wartime |
| | wes—western |

| A | B | C | | |
|---|----|----|---------------------------------------|---------------|
| — | 3 | 7 | Adventure Island | adv-c A |
| — | 3 | 2 | Adventures of Don Coyote | mus-wes-c AYC |
| — | 2 | 2 | Along the Oregon Trail | mus-wes-c AYC |
| — | 3 | 1 | Angels of the Streets | soc-dr AY |
| — | 2 | 4 | Anything for a Song | mus-dr A |
| — | 6 | 3 | Apache Rose | mus-wes-c AYC |
| — | — | 3 | Arnelo Affair, The | cri-mel A |
| 1 | 14 | 1 | Bachelor and the Bobby- Soxer, The | com AY |
| — | 1 | 8 | Backlash | mys-mel A |
| — | 3 | 7 | Banjo | dr AYC |
| 1 | 4 | 3 | Barber of Seville, The | mus-dr AY |
| 1 | 3 | 4 | Bellman, The | mel A |
| — | 6 | 1 | Bells of San Angelo | mus-wes-c AYC |
| — | 1 | 6 | Bells of San Fernando | mel A |
| — | 3 | 2 | Big Fix, The | mel AY |
| 3 | 6 | 2 | Black Gold | dr-c AYC |
| 1 | 5 | 8 | Black Narcissus | dr-c A |
| — | 1 | 8 | Blackmail | mys-mel A |
| — | 1 | 3 | Blonde Savage | adv AY |
| — | 3 | 2 | Blondie in the Dough | com AYC |
| — | — | 5 | Blue Veil, The | dr A |
| 2 | 5 | 1 | Bob, Son of Battle | dr-c AY |
| 1 | 8 | 2 | Body and Soul | dr A |
| — | 2 | 2 | Border Feud | wes AY |
| — | 4 | 11 | Born to Kill | cri-mel A |
| — | 6 | 8 | Brute Force | cri-mel A |
| — | — | 4 | Buffalo Bill Rides Again | wes AYC |
| — | 1 | 4 | Bulldog Drummond at Bay | mys-mel AYC |
| — | 2 | 1 | Bulldog Drummond Strikes Back | mys-mel AY |
| — | 4 | 4 | Burning Cross, The | dr A |
| — | 2 | 3 | Bury Me Dead | cri-mel A |

| A | B | C | | |
|----|----|----|--|---------------|
| — | 5 | 11 | Calcutta | cri-mel A |
| 2 | 8 | 4 | Captive Heart, The | war-dr AY |
| — | 1 | 5 | Caravan | adv A |
| — | 8 | 4 | Carnival in Costa Rica | mus-com-c AY |
| — | 3 | 4 | Carnival of Sinners | dr A |
| — | — | 3 | Case of the Baby Sitter | com A |
| — | 10 | 5 | Cheyenne | mus-wes A |
| — | 2 | 2 | Christmas Eve | dr A |
| — | 1 | 2 | Citizen Saint | doc-dr AYC |
| — | — | 3 | Code of the Saddle | wes AYC |
| — | 2 | 2 | Colonel Chabert | dr A |
| — | 2 | 2 | Comedy Carnival | com-c A |
| 1 | 10 | 3 | Copacabana | mus-com A |
| — | 3 | 8 | Corpse Came C.O.D., The | cri-com A |
| — | 4 | 3 | Crimson Key, The | mys-mel A |
| 2 | 13 | 4 | Crossfire | soc-mel A |
| — | 3 | 10 | Cry Wolf | mys-mel A |
| 1 | 10 | 3 | Cynthia | com AYC |
| — | 4 | 7 | Dark Delusion | dr AY |
| — | 7 | 4 | Dark Passage | nov A |
| 1 | 13 | 3 | Dear Ruth | com AY |
| — | 8 | 7 | Deep Valley | mel A |
| — | 3 | 11 | Desert Fury | mel-c A |
| — | 2 | 7 | Desire Me | war-dr A |
| — | 3 | 3 | Desperate | cri-mel AY |
| — | 2 | 6 | Devil's Envoys, The | fan A |
| — | 3 | 3 | Dick Tracy Meets Gruesome | mel A |
| — | 3 | 8 | Dick Tracy's Dilemma | cri-mel A |
| — | 8 | 8 | Dishonored Lady | dr A |
| 2 | 10 | 6 | Down to Earth | mus-fan A |
| — | 4 | 2 | Dragnet | cri-mel AY |
| — | 13 | 4 | Egg and I, The | com A |
| — | 1 | 2 | Escape Me Never | dr A |
| — | 1 | 5 | Exposed | cri-mys AY |
| — | 7 | 6 | Fabulous Dorseys, The | mus-biog AYC |
| — | 1 | 3 | Farewell, My Beautiful Naples | mus-dr A |
| 3 | 8 | 4 | Fiesta | mus-dr-c AY |
| — | — | 3 | Flashing Guns | wes AYC |
| — | 3 | 4 | For the Love of Rusty | dr AYC |
| 3 | 3 | 3 | Forever Amber | dr-c A |
| — | 6 | 6 | Foxes of Harrow, The | adv A |
| — | 9 | 3 | Frieda | war-dr A |
| — | 10 | 4 | Fun and Fancy Free | mus-car-c AYC |
| — | 3 | 4 | Fun on a Weekend | com A |
| — | 2 | 2 | Gangster, The | mel A |
| — | — | 6 | Gas House Kids Go West | com AY |
| — | — | 4 | Gas House Kids in Hollywood | mys-mel AYC |
| 2 | 14 | 3 | Ghost and Mrs. Muir, The | fan A |
| — | 1 | 4 | Ghost Goes Wild, The | com A |
| — | — | 5 | Ghost Town Renegades | wes AYC |
| — | 3 | 1 | Girl of the Canal, The | dr AY |
| — | 5 | 4 | Golden Earrings | war-mel A |
| — | 1 | 2 | Great Betrayal, The | doc A |
| — | 4 | 1 | Great Dawn, The | mus-dr A |
| 11 | 7 | 1 | Great Expectations | nov AYC |
| — | — | 5 | Green Cockatoo, The | cri-mel A |
| 1 | 1 | 4 | Green Dolphin Street | dr AY |
| — | 12 | 2 | Green for Danger | mys-mel A |
| — | 6 | 2 | Guilty, The | mys-mel A |
| 1 | 7 | 5 | Gunfighters | wes-c A |
| — | — | — | Hal Roach Comedy Carnival (See Comedy Carnival) | |
| — | — | 5 | Hard Boiled Mahoney | mel A |
| — | 1 | 3 | Hat Box Mystery, The | mys-mel A |
| — | 3 | 4 | Heartaches | mus-mel AYC |
| — | 4 | 4 | Heaven Only Knows | fan A |
| — | 9 | 1 | Her Husband's Affairs | com AY |
| 1 | 4 | — | High Tide | cri-mel A |
| — | 9 | 3 | Hit Parade of 1947 | mus-com AY |
| — | 2 | 2 | Hollywood Barn Dance | mus-com AY |
| — | 4 | — | Homesteaders of Paradise Valley | wes AYC |
| — | 7 | 10 | Homestretch, The | dr-c A |

| A | B | C | | | | A | B | C | | | |
|---|----|----|--|-----------|-----|----|----|----|--|-----------|-----|
| — | 5 | 10 | Honeymoon..... | mus-com | A | — | 14 | 3 | Romance of Rosy Ridge..... | mus-dr | AY |
| — | — | 4 | Hoppy's Holiday..... | wes | AYC | — | 9 | 1 | Roosevelt Story, The..... | doc | AY |
| 2 | 11 | 3 | Hucksters, The..... | nov | A | — | 3 | 2 | Russian Ballerina..... | mus-com | A |
| — | 2 | 3 | Hungry Hill..... | dr | A | — | 4 | 1 | Rustlers of Devil's Canyon..... | wes | AYC |
| 2 | 12 | 3 | I Know Where I'm Going..... | dr | A | — | 1 | 4 | Saddle Pals..... | mus-com | AY |
| 1 | 9 | 4 | I Wonder Who's Kissing Her Now..... | mus-com-c | A | 1 | 2 | 3 | San Demetrio, London..... | war-mel | AY |
| — | 2 | 3 | Invisible Wall, The..... | cri-mel | A | — | 5 | 9 | San Quentin..... | mel | A |
| — | 7 | 7 | Ivy..... | mys-mel | A | — | 3 | 4 | Sarge Goes to College..... | mus-com | AY |
| — | 1 | 8 | Jewels of Brandenburg..... | cri-mel | AY | — | 4 | — | Scared to Death..... | mys-c | A |
| — | 4 | — | Joe Palooka in the Knockout..... | mys-mel | AY | — | 3 | 6 | Schoolgirl Diary..... | dr | AYC |
| — | 3 | 5 | Keeper of the Bees..... | rom | AYC | 2 | 11 | 2 | Second Chance..... | mys-mel | AY |
| — | 2 | 8 | Key Witness..... | cri-mel | A | — | 2 | 2 | Secret Life of Walter Mitty, The..... | mus-com-c | AY |
| — | 1 | 4 | Killer at Large..... | cri-mel | A | — | 4 | 5 | Sepia Cinderella..... | mus-com | A |
| — | 4 | 1 | Killer Dill..... | cri-com | A | — | 4 | 5 | Seven Keys to Baldpate..... | mys | AY |
| — | 4 | 4 | Kilroy Was Here..... | com | AY | — | 1 | 2 | She Returned at Dawn..... | dr | A |
| — | 2 | 4 | King of the Wild Horses..... | mus-mel | AYC | 2 | 5 | 4 | Shoe Shine..... | dr | A |
| 2 | 3 | 2 | King's Jester, The..... | mel | A | — | 5 | — | Shop Girls of Paris..... | dr | A |
| 2 | 12 | 2 | Kiss of Death..... | mys-mel | A | — | 5 | 10 | Singapore..... | mel | A |
| — | 6 | 3 | Lady Surrenders, A..... | rom | A | — | 4 | 9 | Slave Girl..... | com-c | A |
| — | — | 4 | Land of the Lawless..... | wes | A | — | 7 | 5 | Something in the Wind..... | mus-com | A |
| — | 3 | 2 | Last Frontier Uprising..... | mus-wes-c | AYC | — | 3 | 3 | Son of Rusty, The..... | dr | AYC |
| — | 1 | 7 | Last of the Red Men..... | nov-c | AYC | 3 | 5 | 7 | Song of Love..... | mus-dr | AY |
| — | 4 | — | Last Round-Up, The..... | mus-wes | AYC | — | 5 | 6 | Song of the Thin Man..... | mys-mel | A |
| — | — | 5 | L'Atalante..... | dr | A | — | 1 | 3 | Song of the Wasteland..... | mus-wes | AYC |
| — | — | 3 | Law Comes to Gunsight..... | wes | AYC | — | 5 | 3 | Spirit of West Point, The..... | dr | AYC |
| — | 1 | 2 | Life Begins Anew..... | dr | A | — | 2 | 4 | Spoilers of the North..... | mel | A |
| 3 | 14 | 1 | Life With Father..... | com-c | AYC | — | 4 | 3 | Sport of Kings..... | dr | AYC |
| — | 3 | 6 | Likely Story, A..... | com | A | — | 3 | 1 | Springtime in the Sierras..... | mus-wes-c | AY |
| — | 2 | 4 | Little Miss Broadway..... | com | A | — | — | — | Stepchild..... | soc-dr | A |
| — | 5 | 11 | Living in a Big Way..... | mus-dr | A | — | 1 | 0 | Stork Bites Man..... | com | AY |
| 1 | 7 | 3 | Long Night, The..... | dr | A | — | 1 | 2 | Sweet Genevieve..... | mus-com | A |
| — | 2 | 2 | Lost Moment, The..... | dr | A | — | — | 3 | Swing the Western Way..... | mus-wes | AYC |
| — | 3 | 1 | Louisiana..... | mus-biog | AY | — | 3 | 3 | Swordsman, The..... | dr-c | AYC |
| — | 3 | 8 | Love and Learn..... | mus-com | A | — | 4 | 6 | Tarzan and the Huntress..... | adv | A |
| — | 8 | 5 | Love Laughs at Andy Hardy..... | mus-com | AY | 1 | 5 | 3 | Tawny Pipit, The..... | com | AYC |
| 2 | 10 | 5 | Lured..... | cri-mel | A | — | 2 | 5 | That Hagen Girl..... | dr | A |
| — | 6 | 5 | Magic Town..... | dr | A | — | 1 | 4 | That's My Gal..... | mus-com-c | A |
| — | 4 | 3 | Man About Town..... | com | A | — | 6 | 6 | That's My Man..... | dr | AY |
| — | 1 | 2 | Man Within, The..... | mel-c | A | 11 | 9 | 1 | They Won't Believe Me..... | mel | A |
| — | 2 | 3 | Marauders, The..... | wes | AYC | 1 | 2 | 1 | This Time for Keeps..... | mus-com-c | A |
| — | 1 | 3 | Marco Visconti..... | adv | A | — | 5 | 4 | Three on a Ticket..... | mys-mel | AY |
| — | 2 | 2 | Marshall of Cripple Creek..... | wes | AYC | — | 6 | 1 | Thunder Mountain..... | wes | AYC |
| — | 5 | 3 | Merton of the Movies..... | com | A | — | 3 | 15 | Time Out of Mind..... | nov | A |
| — | — | 4 | Midnight in Paris..... | cri-mys | A | — | 3 | 2 | Too Many Winners..... | cri-mel | A |
| — | 1 | 4 | Millerson Case, The..... | cri-mel | A | 1 | 5 | 2 | Torment..... | dr | A |
| 5 | 12 | 1 | Miracle on 34th Street..... | com | AYC | — | 6 | 3 | Trepasser, The..... | mys-mel | A |
| 1 | 4 | 7 | Monsieur Verdoux..... | dr | A | — | 7 | 11 | Trouble With Women, The..... | com | A |
| — | 9 | 6 | Moss Rose..... | mys-mel | A | — | 2 | 3 | Twilight on the Rio Grande..... | mus-wes | AYC |
| — | 8 | 4 | Mother Wore Tights..... | mus-com-c | AY | — | — | 4 | Twins..... | com | A |
| — | 4 | 3 | Murderer Lives at Number 21, The..... | mys-mel | A | — | 2 | 3 | Two Anonymous Letters..... | war-dr | A |
| — | — | 4 | My Father's House..... | doc-dr | A | — | 5 | 11 | Two Mrs. Carrolls, The..... | mel | A |
| — | 6 | 6 | New Orleans..... | mus-dr | A | — | 5 | 5 | Unconquered..... | hist-c | A |
| — | 4 | 3 | Newshounds..... | cri-com | AY | — | 6 | 1 | Under the Tonto Rim..... | wes | AYC |
| — | 1 | 2 | Nicholas Nickleby..... | nov | AY | 1 | 7 | 5 | Unfaithful, The..... | dr | A |
| — | 4 | 6 | Nightmare Alley..... | mel | A | 2 | 7 | 2 | Unfinished Dance, The..... | mus-dr-c | AY |
| — | 7 | 6 | Northwest Outpost..... | mus-rom | A | — | 6 | 2 | Unsuspected, The..... | mys-mel | A |
| — | — | 4 | Oregon Trail Scouts..... | wes | AYC | — | 3 | 5 | Untamed Fury..... | mel | A |
| 1 | 9 | 9 | Other Love, The..... | mus-dr | A | — | — | 5 | Vacation Days..... | mus-wes | AYC |
| — | 5 | 2 | Out of the Blue..... | com | A | 1 | 9 | 2 | Variety Girl..... | mus-com-c | AY |
| — | — | 4 | Over the Sante Fe Trail..... | mus-wes | AYC | — | 5 | 5 | Vigilantes Return, The..... | wes-c | AYC |
| — | 4 | — | Pacific Adventure..... | dr | AYC | — | 2 | 7 | Violence..... | mel | A |
| — | 2 | 5 | Patient Vanishes, The..... | cri-mel | A | — | 3 | 4 | Vow, The..... | dr | A |
| 2 | 12 | 1 | Perils of Pauline..... | mus-com-c | AY | — | — | 3 | We Lived Through Buchenwald..... | war-doc | A |
| — | 2 | 5 | Philo Vance Returns..... | mys-mel | A | 2 | 13 | 2 | Web, The..... | cri-mel | A |
| — | — | 6 | Philo Vance's Gamble..... | mys-mel | A | — | 2 | 6 | Web of Danger..... | mel | A |
| — | 4 | 1 | Philo Vance's Secret Mission..... | cri-mel | AY | 2 | 15 | 2 | Welcome Stranger..... | mus-com | AY |
| — | 1 | 5 | Pioneer Justice..... | wes | AYC | — | 1 | 2 | West of Dodge City..... | mus-wes | AYC |
| 1 | 7 | 8 | Possessed..... | dr | A | — | 2 | 2 | West to Glory..... | mus-wes | AYC |
| — | 1 | 6 | Pretender, The..... | cri-mel | AY | — | — | 3 | When a Girl's Beautiful..... | mus-com | A |
| — | — | 4 | Queen of the Amazons..... | mel | A | — | 4 | 1 | Where There's Life..... | com | A |
| — | 2 | 2 | Queen's Necklace, The..... | hist-dr | A | — | 2 | 2 | Wild Frontier, The..... | wes | AYC |
| — | 4 | 1 | Railroaded..... | cri-mel | AY | — | 6 | 9 | Wild Harvest..... | mel | A |
| — | 1 | 2 | Rainbow over the Rockies..... | mus-wes | AYC | — | 4 | 2 | Winter Wonderland..... | rom | A |
| — | 4 | 2 | Red Stallion, The..... | dr-c | AYC | — | 5 | 1 | Wistful Widow of Wagon Gap, The..... | com | A |
| — | 8 | 8 | Repeat Performance..... | fan | A | — | 3 | 11 | Woman on the Beach, The..... | dr | A |
| — | 11 | 1 | Ride the Pink Horse!..... | cri-mel | A | — | 6 | 3 | Wyoming..... | wes | AYC |
| — | 6 | 5 | Riff-Raff..... | mel | A | — | 1 | 5 | Yankee Fakir..... | cri-mel | AY |
| — | 3 | — | Road Home, The..... | war-dr | A | — | — | 3 | Youth Aflame..... | dr | A |
| — | 3 | 2 | Robin Hood of Texas..... | mus-wes | AYC | — | — | 5 | Zero de Conduite..... | dr | A |





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The Consumers' Observation Post

(Continued from page 4)

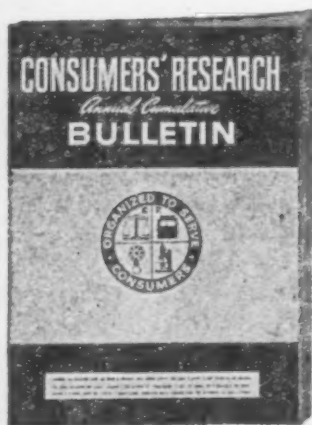
dividual to avoid an excessive intake of iodine. As Food Industries, in reporting the matter, pointed out, the effect of the salt with added iodine on butter, margarine, meat, and canned foods is a wholly unexplored field. It is believed that under certain conditions the treated salt might even cause discoloration of food and possibly affect its flavor.

* * *

SMALL ELECTRICAL APPLIANCES are not moving, in spite of recent cuts in prices, according to dealers in various parts of the country. In Kentucky where table lamps were reduced from \$12.50 to \$7.50, vacuum cleaners from \$76.50 to \$54.50, and electric irons from \$10.95 to \$8.50, customers still failed to show up in any considerable number. Their attitude was one of "Wait and see." It is just possible that taxes and food are taking so large a cut from the family budget that there is nothing left with which to buy appliances. And the amounts paid in taxes and for food are both pretty much controlled by the fiscal and foreign policies of the federal government.

* * *

HOARDING of canned foods, sugar, and flour is being stimulated in various parts of the country by the Luckman committee's food conservation methods, according to a brief study in The Wall Street Journal. Since there are ample stocks of both canned foods and sugar, it seems likely that the "run" on these



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1947 Annual Cumulative Bulletin . . .

THIS big, 200-page *Annual Cumulative Bulletin* summarizes a wide range of CR's previous findings. It is particularly convenient for referring to current ratings of household appliances such as washing machines, electric irons, pressure cookers, as well as radio sets and radio-phonographs which have been reported on singly or in small groups over the past year (unavoidably so, because of the spottiness with which various brands have been obtainable).

IN addition to information on Household Appliances, Equipment and Supplies, other topics dealt with are: Foods and Nutrition; Textiles and Clothing; Photographic Equipment and Supplies; Cosmetics and Toilet Supplies; Radio and Phonographic Equipment, Records, Medicine and Hygiene; Heating Equipment and Fuel; Automobiles, Care, Accessories, Supplies; Writing Materials, Pens; Housing, Home Maintenance, and Repair; Clocks and Watches. Besides the summaries of previous listings, the *Annual Cumulative Bulletin* contains much new material that has not appeared heretofore in any CR Bulletin.

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commodities will not cause any shortages on grocery shelves, although the movement may be a factor in keeping prices high. Women, it appears, believe in some cases that the present food sharing program will lead to rationing, and they naturally want their families to be prepared for future possible emergencies. Despite considerable beating of the drums for return of the OPA, many are inclined to the view that the present administration realizes full well that such a move would be politically hazardous.

* * *

NEW OR NEWLY AVAILABLE: Prell Concentrated Shampoo (Procter & Gamble, Cincinnati) 1-1/2 oz., 49 cents. This product is a green, jelly-like cream which was found on analysis to be a shampoo of the synthetic detergent type. Its chief advantage is that it may be used effectively with hard water to remove grease and soil without depositing on the hair the film or curd that is formed when soap and hard water are used for a shampoo. The common objection to all synthetic detergents is that they have a tendency to do too thorough a job of removing the natural oil and sebum from the skin and scalp, leaving the scalp unpleasantly dry and the hair unmanageable. Those living in hard water areas, however, may quite likely find that the advantages of using such a shampoo will outweigh its disadvantages, and for such cases the product may be considered as warranting a B-Intermediate rating.

Style King Magicflow Multi-Color Pen (S. Buchsbaum & Co., 1737 S. Michigan Ave., Chicago 16) \$5.95. This pen is a comparative newcomer in the ball-point pen field. Its mechanical operation is somewhat similar to that of the well-known Norma multi-color pencil, and it can be used for writing in any one of three colors at will—red, blue, or green. The change in color is made by a simple tip-and-cartridge moving mechanism enclosed in the barrel of the pen. The writing qualities of the Style King were about average when compared with other ball-point pens; the writing showed the usual unevenness characteristic of ball pens. Writing capacity tests were not made, but it seems evident that the average writing life of the separate cartridges will be quite short due to their small size. The cost of replacement tip and cartridge seems way out of line; the charge made is \$1 per cartridge! All of the three colors of ink were fugitive; the red and blue inks faded considerably after exposure to sunlight behind the glass of a window for 40 hours. The green ink, under like conditions, faded almost completely.

Consumers' Research, Inc. Washington, N. J.

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PHONOGRAPH RECORDS

By Walter F. Grueninger

Please Note: Prices quoted do not include taxes. In the ratings AA indicates highly recommended; A, recommended; B, intermediate; C, not recommended.

ORCHESTRAL

Bach: Brandenburg Concerto No. 2. Boyd Neel String Orchestra under Neel. 4 sides, Decca Set EDA 27. \$5. Among the most joyous of the six Brandenburgs. Performance just better than average. Higher frequencies sometimes fuzzy, particularly on side 3. Imported set. **Interpretation A**
Fidelity of Recording A

Berlioz: Romeo and Juliet—Part Two Excerpts: "Romeo's Revery," "Fete at the Capulets," "Love Scene." NBC Symphony Orchestra under Toscanini. 6 sides, RCA Victor Set DV 7. \$7. The heart of the lengthy dramatic symphony, including some of Berlioz's best pages. Definitive performance. Good recording, though the violins lack bite. Pressed on vinylite. **Interpretation AA**
Fidelity of Recording A

Britten: The Young Person's Guide to the Orchestra or Variations and Fugue on a Theme of Purcell (5 sides) & **Bach: Air from Suite 3** (1 side). Liverpool Philharmonic Orchestra under Sargent. Columbia Set 703. \$4.41. This engaging composition for young and old was written for a film at the request of the British Ministry of Education to demonstrate the sight and sound of orchestral instruments. The frequency range is too narrow for high-fidelity demonstration, though the orchestra sounds full bodied at all times. **Interpretation AA**
Fidelity of Recording A

Chopin: Les Sylphides. Boston Pops Orchestra under Fiedler. 6 sides, RCA Victor Set 1119. \$4. A new orchestration of music Chopin composed for the piano, used as a ballet. I prefer these beautiful melodies played on the instrument for which they were written but if you don't object to the orchestration, be forewarned that surface noise on my set was unusually loud and neither performance nor recording scored higher than mediocre. **Interpretation B**
Fidelity of Recording B

Dvorak: Symphony No. 1. Cleveland Orchestra under Leinsdorf. 10 sides, Columbia Set 687. \$6.81. Happy, Bohemian work rarely played. Performance—barely satisfactory. Recording—one of Columbia's poorer, lacking dynamic contrast, high frequencies, body in the strings. Compared with RCA Victor Set 874, the latter, conducted by Talich, wins interpretatively, but with respect to recording is even worse. **Interpretation B**
Fidelity of Recording B

Ravel: Valses Nobles et Sentimentales (4 sides) & **Daphnis et Chloe—Suite No. 1** (3 sides) & **Debussy: Sarabande** (1 side). San Francisco Symphony Orchestra under Monteux. RCA Victor Set 1143. \$5. Refined, intricate French ballet music under the baton of one who, perhaps, has no living peer in this field. Praiseworthy recording except in the loudest passages where overmonitoring kills climaxes and detail. **Interpretation AA**
Fidelity of Recording A

Stravinsky: Firebird Suite. London Philharmonic Orchestra under Ansermet. 6 sides, Decca Set EDA 30. \$7. Exceptionally fine Stravinsky work. Scholarly performance which lacks the excitement of Stokowski's RCA Victor Set 933 (\$4) and the authenticity of the Stravinsky-conducted augmented version, Columbia Set 653 (\$6.81), but offers the highest fidelity. Imported set. **Interpretation A**
Fidelity of Recording AA

CONCERTO

Handel: Concerto in B Minor. William Primrose (viola) and RCA Victor Orchestra under Weissman (5 sides) & **Kreisler: Praeludium & Allegro.** Primrose (viola) (1 side). RCA Victor Set 1131. \$4. There is some question concerning the authenticity of the major work, but regardless of what

the future reveals, it is a notable addition to the viola repertoire. Virtuoso performance. Excellent recording.

Interpretation AA
Fidelity of Recording AA

Mozart: Concerto for Piano (K 450). Kathleen Long (piano) & the National Symphony Orchestra (England) under Neel. 6 sides, Decca Set EDA 25. \$7. A spirited, melodious work played gracefully and recorded with wide range. Imported set. Tops competition. **Interpretation AA**
Fidelity of Recording AA

Tchailkovsky: Piano Concerto No. 1. Rubinstein & The Minneapolis Symphony Orchestra under Mitropoulos. 8 sides, RCA Victor Set 1159. \$5. A show piece Tin Pan Alley helped popularize for this decade. Rubinstein combines warmth, drama and virtuosity. Well supported by the orchestra. Excellent, full-bodied recording with the orchestra, occasionally, sounding too softly. Some surface noise. Competition comes from six year old Horowitz-Toscanini RCA Victor Set 800 which offers a swift, exciting performance not quite as well recorded. Overall, I prefer the new set. . . . The price of the automatic coupling set is \$5, the manual set \$6. This is the first notice I have seen of a price rise for Victor's manual sets. Columbia makes no more manual sets. **Interpretation AA**
Fidelity of Recording AA

CHAMBER & INSTRUMENTAL

Chopin: Sonata No. 2 (5 sides) & **Mazurka, Op. 17, No. 4** (1 side). Robert Casadesu (piano). Columbia Set 698. \$4.41. Casadesu belittles the great Funeral March Sonata. Sepulchral recording. For a more fluent and animated though slightly mannered performance which is more realistically recorded on grittier surfaces, turn to the Rubinstein-Victor Set 1012. **Interpretation B**
Fidelity of Recording B

Concert Hall Society Limited Recordings. The second series of "fine music otherwise unavailable on records" consists of twelve sets (32 records) of chamber music pressed on plastic. Performance and recording of the five sets I heard maintain a high level of excellence. Sets not available separately. Basic price: \$100.

Mozart: Quintet for Clarinet and Strings (K 581). Reginald Kell (clarinet) and the Philharmonia String Quartet. 8 sides, Columbia Set 702. \$5.61. Charming, lovable music—handsome performance—superb English recording. Tops competition. **Interpretation AA**
Fidelity of Recording AA

VOCAL

Humperdinck: Hansel and Gretel. Risè Stevens, Nadine Conner, Thelma Votipka, John Brownlee, etc., with Max Rudolf conducting chorus and orchestra of the Met. 24 sides, Columbia Set MOP 26. \$16.02. Columbia is off to a rousing start in its series recorded in the Met. Gay music, clear English diction, reasonably good performance, lively direction. Wide range recording gives the impression of a theater. **Interpretation A**
Fidelity of Recording AA

Favorite Songs from Famous Musicals, Vol. II. Frances Greer (soprano), Jimmy Carroll (tenor). 8 sides, RCA Victor Set P 177. \$3. "Zigeuner," "Make Believe," "Kiss in the Dark," etc., sung artfully though a trifle operatic, and well recorded. **Interpretation AA**
Fidelity of Recording AA

Marlene Dietrich Sings. 6 sides, Vox Set VSP 304. \$3.75. Originally pressed in Europe about 15 years ago under the Polydor label. Sex-in-the-voice delivery, midway between talking and singing, of German cafe songs. Of interest to collectors and Dietrich fans. Some surface noise. **Interpretation B**
Fidelity of Recording B



Best Wishes
for
A Merry Christmas!

